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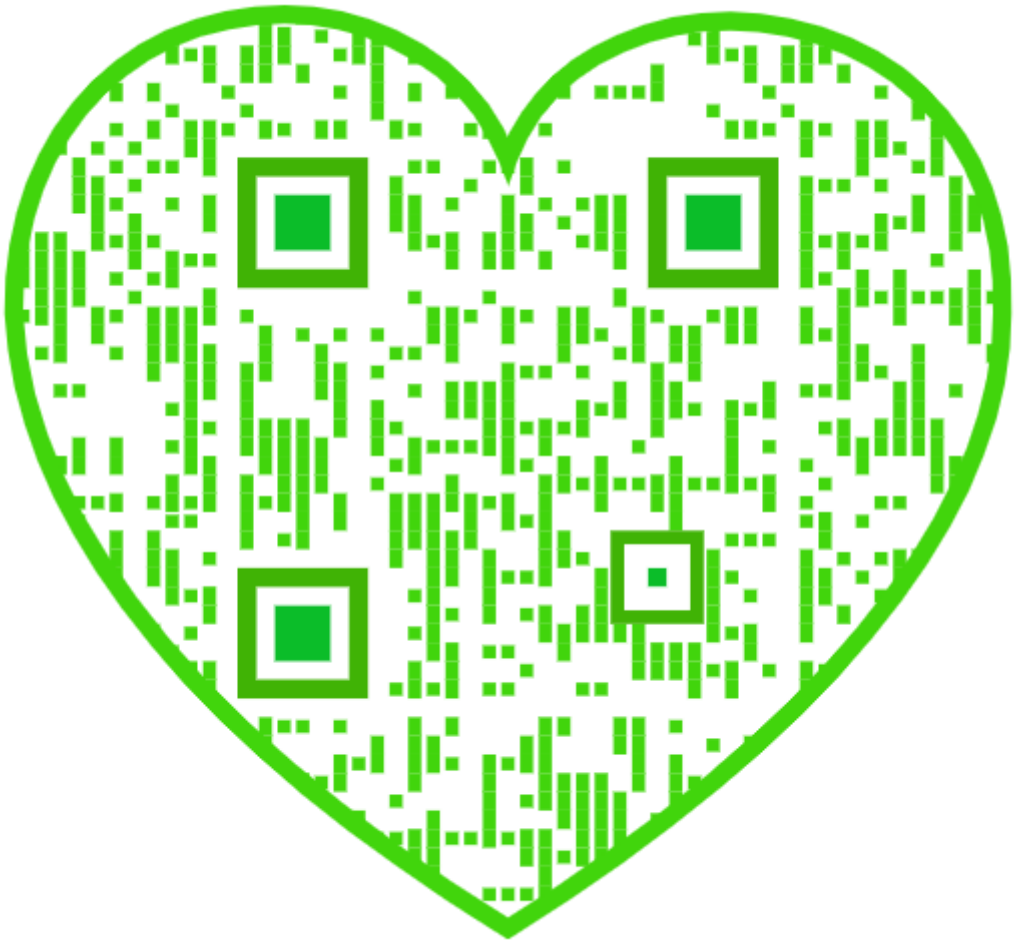

THE AMERICAN

APICULTURIST.

A Journal Devoted to Practical Beekeeping.

VOL. X. JANUARY, 1892. No. 1.

FULL SHEETS OF FOUNDATION.

I wish to give my endorsement to the editorial on page 163 of the December issue of Vol. IX, condemning the use of full sheets of foundation in brood frames and sections. There is no more nonsensical theory extant among beekeepers than that brood combs must be built on full sheets of wired foundation. Without taking into account the endless bother of wiring frames it is certainly in most cases a useless expense. Nine-tenths of the readers of the bee journals are the men who own from one colony to perhaps a dozen; poor men, mostly, and busy, who can ill afford the money to buy such quantity of foundation or spare the time to wire it into the frames.

An eight-frame L. hive takes in round numbers 8 square feet of foundation, or say 1½ lbs. At usual rates this costs in the neighborhood of fifty cents per pound or about sixty-five cents per hive. After this expenditure in the brood chamber what have we to show for it? Sometimes a little less drone comb and — well, that's all that I can think of just now. I challenge any advocate of full sheets of foundation to show more perfect combs than I have for years been obtaining by the use of starters one inch wide. Occasionally a colony will build more drone comb than I want. Especially is this true of new swarms that have by some accident become queenless. In such cases the cause is readily perceived and easily removed. Combs built by such colonies answer just as well for the extracting super as any others do. Drone comb as built by a colony in normal condition is easily disposed of. If there is too much of it I simply cut it out and fit in a piece of worker comb. If one owns only a half dozen colonies he will nearly always have sufficient broken comb on hand for patches. If I do not have a piece of worker comb to insert I let the bees fill the vacant place themselves. This method is not very satisfactory for they are prone to build drone comb again. But after all too much drone comb is a rare exception; so rare, that in an apiary of from twenty to thirty colonies I have not found it necessary to patch half a dozen combs in as many years.

It is often urged that in order to have frames full of comb and fast at the sides and bottom full sheets of foundation must be used. This again is a fallacy as every experienced beekeeper knows. If the frames are filled full of foundation it is sure to bulge from weight of bees and from heat. If from thorough wiring it escapes this disaster the bees

are sure to gnaw it away along the bottom-bar. After much experimenting I am satisfied that the only sure way of securing combs fast all around is by reversing the frames.

Sections full of foundation I have always regarded as an abomination. Consumers complain of most of our fancy sections of honey as being tough and waxy, and draw comparisons between them and the honey they used to get from log gums and bee-trees that are not at all flattering to our modern product. I have never yet seen a comb built on a full sheet of foundation that I could not readily tell from one built on a starter. The foundation is still there even when the comb is built under the most favorable circumstances and by exercising a little care the cells and honey may be scraped off the septum leaving the foundation intact. The crisp tenderness, or if you will, the high excellence of our comb-honey product has been sacrificed to by far too great an extent in our anxiety to secure a larger quantity. But do we secure a larger quantity by use of full sheets in sections? I doubt it very much, and my doubts have been so strong that for several years I have used only narrow starters in my sections. The honey so obtained is much more acceptable on my own table and I have every evidence that it is also more acceptable on the tables of my customers.

This part of Iowa is compelled to record a total failure in the honey crop this season. Possibly one-third the colonies in the country secured enough to winter on. The others had to be fed from five to twenty pounds of syrup. I anticipate heavy winter losses.

Denison, Iowa. Z. T. HAWK.

CHARACTERISTICS THAT ENSURE SUCCESS OR FAILURE IN BEE CULTURE.

Stick-to-itiveness is one of the first and foremost traits that ensures success in any occupation of life, but more especially in beekeeping, as there are times, when everything seems to work against the little busy bee; but as soon as a favorable year comes, and just as quickly, the clouds pass away, and everything looks as if there could never be anything but success. The business is very flattering when all goes well, and unless one possesses stick-to-itiveness it is worse than useless to engage in the business.

THE CARELESS MAN.

It will hardly pay him to even buy a colony of bees, better spend the money in buying honey for the family.

It is such men who injure the bee business most; he buys one or more colonies of blacks, and lets them build as much drone comb as they please, generally raising as many drones as the whole neighborhood needs and this is why it is so hard to keep our bees pure.

Can you tell us, Mr. Editor, why it is that our bees continually breed back to blacks when every scientific beekeeper in the land is trying to weed out all black blood, if it were not for the millions of black drones raised by these same careless bee men and bee women?

Year ago last spring we had a strong queenless colony. One day while standing beside it, I wondered at the host of drones the hive seemed to contain; quickly I ran it through to see if I had not by some mistake given it one or more drone-combs, that we keep especially for storing honey for winter, but could find no such combs, only small patches of drone comb. Then I noticed these

drones were black and hybrids, so I knew they must have come from a neighbor's apiary. Upon examining many colonies I found plenty of drones for a large apiary. At other seasons I have noticed the same thing that if the box-hive men and careless movable-comb-hive men only raised pure bees, we would not need to raise any drones or certainly more than we needed.

LUCK IN BEEKEEPING.

There is no such thing as luck with bees; it all depends whether we give them the required care or not. The time is coming, in fact, is here now, when to make bees pay we must feed them more. Why? Because we use less brood combs than formerly, and force them to store their honey in sections. This is one reason the box-hive men do not run out of bees. Generally they use large hives and do not "rob" their bees unless they are sure they can spare it (a lesson we might well learn of them) and when they do take honey from them they often cut the honey out at the top of the hive when the bees go to work and fill in drone comb; this is one way they rear such hosts of drones.

BEGRUDGING THE BEES THEIR LIVING.

We are too apt to do this, if not in thought in act; we take away their honey too closely and begrudge the sugar to make syrup for them sufficient for their well doing. We don't give them near enough, if we feed at all; some one has said "twice too much is just enough." It is with the bees as with men; if they have their pockets full of money, they take advantage of the times and make money, while a man with an empty purse has not the heart to venture far. So it is with the bees, a hive well stored with honey gives them energy to push around for more, provided they have room to store it.

A man who worked a year with Mr. Hetherington some fifteen or more years ago, took dinner with us a few weeks since. He said Hetherington used, in the spring, even when the bees had plenty of honey to carry them through, to extract from their combs and feed it back to promote brood-rearing. Is not this one secret of his success as a beekeeper?

SUGARED HONEY.

Perhaps some beekeeper failed to feed all he should, for fear he may be thought by some to be feeding sugar to be stored for honey. If we do what is right and feed no sugar that will ever get into the sections, we need not trouble ourselves what others say. Besides, we need not tell our neighbors how much sugar we have fed, unless it is such year as a failure of the honey crop, and then by telling of it and having no honey or but little to sell, people can see the absurdity of accusing one of having sugared honey, especially if one feeds granulated white sugar, and only gets black honey from his bees as we have done the past season.

We must keep our bees in good condition at all times, if we wish a crop of honey when it comes. We can't always know when it will come; everything may look prosperous for a crop and a few weeks of dry weather will cut it off. Then again when we think it almost impossible to get any honey, some plant will spring up and yield nectar more than usual.

I remember this was the case one fall

after a dry summer. We thought we should have to feed largely, but as it seemed to us almost as much a miracle as manna from Heaven, so suddenly the honey came. A small spreading herb that belonged to the mint tribe, seemed to grow everywhere, bountifully yielding honey. The bees fairly swarmed upon it; it was wonderfully visited by the little busy workers that search everywhere for sweets and nothing is neglected. Since that year we have scarce noticed that particular plant growing.

Another fall we had about decided to send off for several barrels of sugar, when on the ninth of September we noticed the bees were very busy as if they had struck a bonanza. On examining their hives we found they were storing new honey quite lively; they filled up for winter and gave some surplus. Had the colonies been left to dwindle into mere handfuls they could not have stored even enough for winter without any surplus.

If we make up our minds to feed our bees *all* they need, we shall find in the long run they pay us much better than when we feed only just as little as we can possibly give them, and then we shall cease to worry about them. If we know they are all right as far as feed is concerned, we can dismiss them from our minds; it is worth a good deal to know our bees have a plenty.

I think people will now cease to cry out sugared honey, they having had to go without so long. Honey has been plenty for several years, in the west especially.

Many neglect their bees because they have no time to take care of them they say, but really it is a want of interest in them; they have neglected them so long that they have not received much benefit from them and so take no time to look after them. They can take time to visit and to receive company; have time to feed and care for everything else, but they seem to think bees must feed themselves and work for their owner. They have time to "rob" them of what little honey they have and then let them dwindle down, and perhaps starve and they say, "bees don't pay."

A woman bought a colony of bees of us several years ago. It was a dry season; we had but few swarms and returned what we had. She divided her bees into three colonies, afterwards said her bees were doing no good. We advised her to feed them as she wanted to increase them, but she had no time to feed as she had so much company; finally, did feel sorry when it was too late for them to build up into good colonies. In the fall she sent over for our extractor, and took what honey they had, thinking they would get enough for winter which they did not and all died as would be expected, and she said "bees did not pay."

The greatest drawback to beekeeping is that we do not understand the business and we don't take time to intelligently study it up. One has truly said "It is less trouble and less expensive to succeed than to fail," and if we haven't time nor inclination to keep and handle bees intelligently, we had better sell them or turn them over to some other person, or to some other member of the family, as a change of ownership often gives a stimulus to read them up, and when one is thoroughly posted in bee culture it becomes so fascinating that the bees are rarely neglected.

I used to think every one who owned land ought to keep a few bees. I think so now; but no more than that

every one should keep stock, or that every one should follow some of the professions. As farming does not pay unless the farmer intelligently does his work ; no more does beekeeping pay unless intelligently handled. One or more of the latest books on bees should be bought and read, and several bee periodicals should not only be taken but read that we may keep up with the times.

Roseville, Ill.

MRS. L. C. AXTELL.

NOTES AND COMMENTS.

INTRODUCING QUEENS.

It is a great mistake to keep a hive queenless for more than a few hours for the purpose of having the queen successfully introduced says the *Canadian Bee Journal*. Queens may be removed any time during the day, and be replaced by others at night without loss, if properly done.

No doubt D A. Jones can introduce queens successfully by most any method ; but as Mr. Jones cannot be present and introduce queens for fifty thousand other beekeepers, a more simple and practical method must be devised. Probably not one person in one hundred who have queens to introduce could do it successfully by the Jones' method.

Coming down to the real science of introducing queens by the immediate introduction method, there is no necessity for having any colony queenless for more than one minute. But as the plan cannot be successfully practised by the average beekeeper, it is useless to give it here.

A VERY WRONG CONCLUSION.

Prof. Alex. S. Wilson, of Glasgow, has recently investigated the amounts of sugar contained in the nectar of various flowers, and laid the result of his labors before the British Associations. He shows that $2\frac{1}{2}$ pounds of honey are equivalent to the supply obtained from five millions of flowers, or about two and a half millions of visits for one pound of honey.

The above tests must have been made in a most unfavorable season. A good colony of bees will do much better than stated by Prof. Wilson even after the honey harvest is considered closed. Professors are not always right. Thomas G. Newman cannot think Prof. Wilson was correct in all his statements.

A NOVEL METHOD OF FINDING QUEENS.

This was given by M. M. Baldridge· Have a light shallow cover, say two inches deep, that can be put over the frames of any hive; and a little drumming while this cover is on will get the queen with a few bees upon the under side. By drumming one hive, then the next, and so on, and then going back to the one drummed first, you may secure a dozen queens in a very short time, without taking a comb out of the hive. This will work equally well with box hives having a hole or holes in the top. If you drive up only a teacupful of bees, the queen is pretty sure to be among them. — *Gleanings.*

The above is correct. I have an out apiary of seventeen hives of black bees situated five miles from home. Early in November I had occasion to go there and introduce some queens. The weather was cold and cloudy, and, though the bees were in movable comb hives, it was too chilly to take the frames out to find the queens. There was in the apiary one canvas honey-board. This board is merely a frame of $\frac{7}{8}$ inch square pieces nailed at the corners, and a piece of heavy duck cloth nailed thereto. This left a space when placed on the hive of about an inch between the frames and cloth. I then gently smoked the bees with rotten wood and in a few moments there I found about a pint of bees and queen on the canvas. In less than thirty minutes I had driven out and found six queens. Three days later six Punic queens were introduced to the above colonies. As I never lost a queen by this method of introduction, I have no doubt all were successfully introduced.

Some of our customers do not have good success introducing queens late in the fall. I can assure all that the season has nothing to do with their ill-luck and poor success. When a colony has been queenless three days, a good fumigating

with tobacco will insure safe introduction. Each of the six colonies in the out apiary were so treated.

THE CONVENIENCE OF THE ALLEY TRAP DURING SWARMING.

From Gleanings, Dec. 1.

I have noticed now and then something about the Alley queen-and-drone trap My experience with it has been good. It is impossible for me to attend the bees in the day time; but when I go home late in the afternoon I can tell which ones have swarmed by their clinging to the cage part of the trap. I just change the location of the parent hive, and put the new hive in its place, release the queen and what workers are clustering on the cage. The result is, in a few days I have a rousing colony, where if it were not for the queen trap, I should run a big risk of losing the swarm. But as it is now, I am satisfied with them for my use.

Olean, N. Y., Nov. 20. GEO. SHIBER.

There are not less than 100,000 of these traps in use, and but one opinion regarding their utility and practicability. Place one of the traps on your hive and there will be no danger of losing the swarm if one issues in your absence. Then again, as the trap catches and destroys nearly all the drones, swarming, in a great measure, is controlled and prevented.

It is the universal testimony of all who use the traps, that they aid the bees and not annoy them in their work.

PATENTS ON BEE-HIVES.

Another patent has just been issued on a bee-hive. It is dated Nov. 10, 1891, and was given to Reuben H. Ewing, of Iowa. It is the old story—a moth-proof hive—worthless and useless with not a new feature in it. Here is the claim of the so-called invention:

The bee-hive A, having a horizontal bottom B, with the center hole *b*, just large enough to allow the bees to pass through it, and an upwardly convex bottom C, whose oppositely inclined sides meet in a vertex *c*, directly under the said hole, and just far enough therefrom to permit the bees to reach the hole, the said hive being provided with opposite entrances *c' c'* for the bees and moths between said bottoms as shown and described.

The inventor does not even know the sex of worker bees, as will be seen by the following from specifications, where it is called *he* every time.

The tendency of the bee is to move upwardly; and as soon as he reaches the vertex *c* he will make for the entrance *b*, while the moth will travel up one side of the bottom C, and down the other, thereby failing to get into the honey or bee-chambers at all, not being able to reach the hole *b*, even if inclined to do so.

What a *pity* it is to fool away good money for such a worthless patent!

What *stupidity* it is to maintain a lot of useless "examiners" to approve of inventions, the practical workings of which they know nothing about!

What *dishonesty* it is to grant patents, over and over again, to different persons on precisely the same thing!

What *robbery* it is to take the money of the credulous inventor and render no equivalent for it!

In this case the patentee has sold one-half of the "invention" in advance to secure the money to get a patent, which for practical purposes, is not worth the paper it is printed upon! Bah!—*American Bee Journal.*

Patents are obtained how? Well, the writer has been granted three patents within a few years and, being of an observing disposition has "caught on" some of the points usually employed to work a job. I do not want it understood that any unfair or underhanded work was employed to engineer any patent claim through. None were so far as I know. But there is a good deal of favoritism shown in the matter of obtaining some things in this world.

Here is an illustration of the way things are done at Washington. A patent was granted on an automatic device for hiving bees. Another party used the same principle and hitched a lot of useless clap-trap to it, and was granted

a "Combination Patent." Why does the great government of the United States do business in that way? The officials who granted the "combination" claim well knew that it was not worth the paper it was written or printed on. Now in order to get rid of the "*combination*" patent, the person granted the original must go into court, conduct an expensive suit to prove his claim of priority of invention. The patent laws of this country are such that anyone can hitch any sort of a worthless arrangement to the most valuable device already patented, and get a "combination" claim allowed. Said combination will be claimed an "improvement" and, though a detriment, the claimant will be granted a patent. In some cases the improvements claimed in the combination were considered and thrown out by the original inventor. Patent laws need revising.

CHESHIRE AND FOUL-BROOD.

Every person in North America, who has any personal experience with foul-brood, knows that the honey from a foul-broody colony will spread the contagion far and wide, if this honey is placed where the bees have access to it. There is no guesswork about their being "death in the honey," and yet Cheshire says, "the popular idea that honey is the means by which it is carried from hive to hive, and that mainly through robbing, is so far in error, that only occasionally and casually can honey convey it from colony to colony."—[*C. B. J.*

The writer of the above is correct. It may be said that foul-brood is spread by the introduction to a healthy colony of queen taken from a foul-broody stock, but this is by no means the most fruitful method of spreading the disease. One ounce of honey from a diseased colony exposed to the bees will destroy in time all the apiaries in the country.

Beekeepers in districts where foul brood abounds should be constantly on the watch for the disease. It is next to an impossibility to check its spread if it is in the apiary of any but the most careful person.

RED-CLOVER BEES AHEAD.

Red-clover Italian bees, 100 lbs. comb honey in sections per colony. Yellow Carniolans, per colony, 80 lbs. in section honey. Italians, per colony, 60 lbs. comb honey. Blacks, per colony, 28 lbs. comb honey. The bees are booming at present.

The above extract is from *Gleanings* Oct. 1. It will be seen that the yellow Carniolans come in second in gathering honey. The question is, Where did this man get the yellow Carniolans in season to test their working qualities in the season of 1891.

His name does not appear on the books of the API as a customer for a queen of this race?

If yellow Carniolan bees will gather 80 lbs. honey per colony, there is no doubt that they will soon gather as much as any race of bees. It is important to know that others besides Alley have yellow Carniolan bees. See the point?

THE ALBANY CONVENTION.

The North American Beekeepers' Association's 22nd Annual Convention opened session at Agricultural Hall, Albany, N. Y., at 9 o'clock, Dec. 9. There were about one hundred twenty-five ladies and gentlemen present from all over the country.

An informal meeting was held at the hall and hotel on the evening of Dec. 8. Mr. P. H. Elwood opened with an address of a few well chosen words outlining many thoughts for the best interest of American beekeepers which will be published in full by Bro. Newman of the *A. B. J.*

Mr. Elwood is a modest, unassuming gentleman and one of the most extensive beekeepers in the state of New York, a careful speaker and a brainy man.

After the appointment of the committees and routine business, Mr. G. M. Doolittle delivered an address on "The Bees, the Location and the Apia-

rist," which contained some very good points such as the value of a good queen, the necessity of a good location and the need of thoroughness. It was rather a review of what Mr. Doolittle has written about for years. There were no new points but on the whole the address was interesting and well delivered.

Mr. D.'s address was followed by one of those tiresome discussions on "Should Beekeeping be made a Specialty?" which amounted simply to a "back and fill" with no decided conclusions. Mr. Elwood, however, ended the discussion with the words of one of our well-informed N. Y. beekeepers to the effect that it was better to work into bees gradually and then decide whether or no the apiarist wished to make a specialty of apiculture.

After dinner Mr. W. Z. Hutchinson read a paper by Mr. W. F. Clark (who was unable to be present), on "Prevention of Swarming" in so broken and disconnected a manner that it was hard to understand the points, therefore it would have been better to have left such papers to a full reproduction in the journals, when the writers are unable to be present. Such a paper can not be read with the force of the author by many. It is very liable to ruin a good writer's reputation by trusting the delivery to anybody without a careful study of the points it contains.

The discussion of the question of "Prevention and Control of Swarming" was another very dull affair, taking valuable time which could have amounted to something in the hands of one or two good apiarists with careful, well written papers. As it was, the question of "Control of Swarming" was touched upon but once, while the meeting went off into a wild explanation of individual methods for preventing swarming. It was a Vermont beekeeper who straightened the matter out by showing that it was better to prevent swarming as far as possible and to allow them to swarm as their nature called for and then make the best of it by putting on the boxes on at once and hiving the bees on starters only. There were several in the hall who were surprised that the matter of "control" was so suddenly dropped and one man made the remark after the meeting that he believed that the whole matter would be solved through the invention of a perfect swarming device, trap, or something of that nature, and by so manipulating hives that the swarming is brought to a few colonies somewhat after the jumping plan.

The new Canadian method of jumping hives was brought up, but the speaker said he knew very little about it but intended to learn of its workings as soon as he could spare the $5.00 it required to purchase it. It is doubtless a valuable management and the API will surely give it as soon as it is known to the world.

Mr. G. H. Knickerbocker read a well written paper with a plea for setting a standard on Italian bees to be adopted by the Association. It was discussed quite extensively but was at last left to a committee to pass in resolutions to be voted upon by the convention. Any convention might set a standard of markings but what would it amount to? There would not be one breeder in ten to heed the standard. American breeders are after a solid yellow bee. The three-band test is out of sight. All other qualities are in the hands of the breeder. Careful breeders will get their share of orders whether or no.

It is hoped that the North American will not adopt a standard below what has already been achieved at all events.

Dr. A. B. Mason was unable to be present and his paper, "The Outlook for Apiculture at the Columbian Exposition," was read by Mr. W. Z. Hutchinson.

It was found that only 100 square feet had been assigned to each state for bee exhibits and when one state had applied for 1,000 feet of the 1,300 the 300 feet left would be rather small for California, New York or Texas. A committee, to act with Dr. Mason, on

the securing of sufficient space was appointed and there will doubtless be no trouble about their securing all the space wanted. It is hoped that every beekeeper will make some display at the World's fair in 1893. The committee will ask for the privilege to enter honey exhibits after the new honey crop is taken off. It was thought poor taste to require the exhibition of last year's honey at this great fair. The API will inform its readers of the above matter as soon as the committee have matters arranged and it is hoped that all will combine in making the Bee Department at Chicago in '93 the grandest the world ever saw.

Agricultural hall was well filled Thursday morning at ten o'clock when the convention was called to order by President Elwood. The first business done was that of designating a place to hold the next meeting. New York, Buffalo, Cincinnati, Denver, Chicago, Toledo, Pittsburg and Washington were proposed. A vote taken decided in favor of Washington, D. C.

The election of officers resulted as follows: President, Eugene Secor; Vice-President, Captain John Hetherington; Secretary, W. Z. Hutchinson; Treasurer, Ernest Root. Volunteer contributions were taken up for the benefit of the Association. A general discussion followed on "The Prices and Uses of Honey and Sugar."

Dr. C. C. Miller was unable to be present on account of ill health. His paper, on "Can we settle on two sizes of sections as standard?" was delivered by Mr. Ernest Root in a clear and very interesting manner. Several of the leading commission men of New York were present and they all showed a preference for the narrow, short-pound section either glassed or in cartoon.

A large committee made up of the commission men and leading honey producers were to report a preference of size and shape of sections best adapted to the American market. It is probable that a narrow box having a larger comb surface than the $4\frac{1}{4}$ x $4\frac{1}{4}$ box will be recommended. To save the expense of new supers or clamps for the later patterns of bee-hives to hold the $4\frac{1}{4}$ dimension in depth and make them of a length that three will fill our regular section holders, perhaps seven-to-the foot or $1\frac{3}{4}$ inches in width.

The question of spraying fruit trees during bloom was taken up before one of the leading professors of entomology of New York State and a hot discussion ensued. It was resolved that the North American Beekeepers' Association condemn the practice of spraying fruit trees during blossom.

The professor's decision on the matter was hailed with general applause by the apiarists present. He said "I shall recommend, as I have heretofore, that spraying be not done until after the petals begin to fall; and in the meantime I hope you will furnish us for examination, specimens of bees that have been poisoned from sprayed fruit trees, and if it can be proved beyond a doubt that spraying with weak solutions while trees are in full bloom is injurious to the bees, every effort will be turned to a discontinuance of the practice throughout the country."

Specimens of the different races of bees were asked for to place in the N. Y. museum of entomology.

It was suggested by the Association that a separate department under the head of agriculture be asked for to include apiculture and that experimental stations be established and reports made and that a modest appropriation be made to cover the cost of printing reports, etc.

WOULD NOT TAKE $10 FOR HIS QUEEN.

FRIEND ALLEY: The queen you sent me came in fine condition and is doing all I could ask of her. I got but thirty drones from her, and they were the largest I ever saw. The bees from this queen are in the fields and I am highly pleased with their looks and the way they move. I would not take $10 for her as she just suits me, and when that is the case perfection is about reached.

Poplar Flat, Ky. L. C. CALVERT.

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EDITORIAL NOTES.

DECENCY OUTRAGED.

When an editor, especially one who styles himself an English gentleman, publishes a private letter in order to berate and falsify the statements of a brother editor, decency is outraged. This is what T. W. Cowan, F. G. S., F. L. S., F. R. S., etc , editor of the British Bee Journal is guilty of.

The AMERICAN APICULTURIST is now ten years old. There are a good many names on its subscription list that were there ten years ago.

The API will be of more than usual interest the coming year, as it has in store much new, valuable and interesting matter.

In order to place the doings of he Albany Convention before its readers with as little delay as possible, the API is mailed several days ahead of its usual time.

WHAT NEXT?

Now that the Albany Convention is over, what next? Well, there are now enough new topics to discuss during the balance of the winter months. By the way, how do you like Brother Pratt's report of what was said and done at the convention? Bro. Pratt is a newspaper man, and has had a good deal of reportorial experience. 'Tis the first time for many years that the API had a special correspondent on the spot. Some eight or nine years ago, Mr. S. M. Locke, then editor of the API attended a convention held in Syracuse, N. Y., and made his own report.

MAILING QUEENS IN AIR-TIGHT CAGES.

The last two queens shipped from the Bay State apiary were mailed to a bee-keeper in California, sometime during the last week in October. The cages used previous to that time had saw kerfs in them for ventilation, but by mistake those used for the two queens had no ventilating arrangement, and when the queens were packed the wire netting was placed face to face. In order to pack securely, the cages were placed in a vice and pressed together as hard as possible, without injury to the wood. In fact, the cages were as near air-tight as it was possible to make them. A report, "queens received, but both dead" was expected, but up to date no word has come from the recipient, and it is natural to conclude that the queens were all O K when received. The writer has always claimed that no water and but little air was necessary for safe delivery of queens by mail.

THOSE WHO ADVERTISE IN API.

Look over the advertising pages of the API and you will find that nearly all the ads. are new. Not new advertisers, but new ads. from old advertisers. It is not necessary to say that all whose ads. appear in the API are "reliable." These parties have been so long in business that no one questions their honesty or ability to fill orders.

THE APICULTURIST ENDORSED.

Nearly all those who renew their subscriptions to the API are free in their expressions as to the stand this paper has taken in its defence of those parties who have imported and developed new races of bees.

One of the new subscribers, and one who had been a subscriber several years ago, but lost the last three years, writes thus: "Your criticisms of —— were just and proper and you served them right. Stand up for your rights, and pay them in red-hot shot."

On another page mention is made of the fact that nearly all the bee papers discourage the introduction of any new thing in the line of beekeeping. To show that this statement is correct, below is given a foot-note, found at the bottom of an article in the *Canadian Bee Journal* of Dec. 1, 1891.

We are inclined to think that the Punic queens or bees, and their so-called wonderful advantages will explode when they are thoroughly known. Advice from those not interested in the sale of them, leave us little hope of satisfaction in introducing them. We are inclined to think that the person who pays $80, or even $8, for a stock of these bees, and mixes them with his Italians, will find that he has made a great mistake. We are determined not to mix them, and hope that no beekeeper in our locality will get them.

Now, Bro. Jones, this is decidedly un fair. It seems that no amount of good reports of these bees, such as appeared in the *British Bee Journal,* the last year, will convince the editor of the *C. B. J.* that the Punics possess real merit.

When Mr. Jones introduced the Cyprian and Holy Land bees, the bee-papers did not even intimate that he was doing a fraudulent business. I believe such publications did all they could to promote Jones' interest.

There are a good many Punic queens in Canada and Bro. Jones' bees may get mixed.

It will be time to cry the Punics down when they have been found worthless. The evidence of those who have them is favorable. Take hold and test these bees, and then give an opinion of them based upon experience. This will be the better way. Those who are trying to promote and advance bee culture should receive better treatment than they are getting from the bee journals. Don't you think so, Bro. Jones?

Please renew your subscription and get some beekeeping friend to subscribe with you. Look over the new club list on another page. 'Tis the most liberal list of any made this year.

THE KETTLE CALLING THE POT BLACK.

The Editor of the *Review* says that the API puffed its own goods and then berated those who criticised them. In this Bro. Hutchinson is mistaken. The "berating" was merely a strong protest against being called a liar and a fraud by those who undertook to discuss the question of new races or new strains of bees. Brother H. is hardly justified in berating the API because it does business differently from the *Review.* The API will be glad to publish articles from any one who wishes to discuss any question in a fair and candid manner. Leave out the intimations that those who are importing and developing new bees are frauds and gulling the public. That is not argument and is very unfair. To save further controversy on one point, the bees now called "golden Carniolan" will be called "American golden Carniolans." This may be more satisfactory to those who do not think as the API does.

THE ALBANY CONVENTION.

The great convention has met, and was a grand blank as will be seen by the report of its proceedings in this issue. Many of the prominent beekeepers of America were present.

The report as published in the API is by E. L. Pratt. No doubt it will prove of some interest to those who read it.

THAT NEW SYSTEM OF HANDLING BEES.

The *Canadian Bee Journal* is very enthusiastic over Alpaugh's system for handling bees. The system is not so very new, yet it is a good one, and no doubt will be adopted and practised by many of the smaller beekeepers.

The system in substance is this: Several colonies are so arranged that two hives can be removed to some distant part of the apiary, thus leaving the middle one to catch all the bees that return to the old location. If there are three strong colonies standing very near each other, by removing the two outside ones,

the result will be one enormous strong colony. Plenty of sections must be placed on the hive to furnish storage room for all the honey such a large number of bees would gather.

The above is one of the ways of the new system. The other is the Heddon method, which is to remove two or more full colonies, and after placing a queen and a few bees in an empty hive well supplied with sections and frames having " starters" the bees are given a chance to enter it and go to work.

In a future issue of the Api this plan will be given in detail so that all will thoroughly understand it and take advantage of the new system the coming season.

SOMETHING ABOUT FIVE-BANDED BEES.

Several parties who deal in five-banded Italian bees were terribly put out with the Api for its editorial opinion of the merits of these bees. About every issue of *Gleanings* says much worse things of five-banded bees than was ever expressed in these columns. As the Api is not a political organ of any party, its readers should be considerate enough to accept its opinions as being honest and impartial. No opinion given in this paper is intended to injure anyone or the business of any persons. The columns of the Api are open to any bee-keeper who has any thing worthy of mention and all are requested to use them for the benefit of the beekeeping public.

A good deal of very interesting matter concerning Punic bees will be given in the Api during the winter months. Many almost incredible features peculiar to the Punics only will be described. There are one or more things credited to this new race that must be demonstrated in the Bay State apiary before the Api dares to claim they are facts. The Api is not permitted just yet even to hint at some of the wonders that will soon be made public concerning the Punics. Watch its columns and see whether or not this is all talk.

WHAT'S IN A NAME?

While certain parties are disputing over the definition of the word "*Punic*" it may be well to consider for a moment what that word signifies so far as affecting the good or bad features of the bees called *Apis niger*. Let the name go to the dogs, leave it out of the discussion altogether. Have the bees styled *Punics* any good qualities? Are they as good as is claimed for them? Have they features and qualities not possessed by other races? With one exception, so far as the writer has observed, all reports have been favorable. The exception was that they "are no better,"—but just as good—than other races, so no damaging reports have been made by anyone. Some of the largest and best colonies of bees in the county of Essex, Mass., are Punics. Unless the winter is a most unfavorable one for bees there will be at least several hundred colonies of Punics in North America at the opening of the season of 1892. The good qualities of these bees have been stated in the Api. Not one statement will be modified. Experience with these bees only strengthens a former good opinion of them.

The controversy growing out of the introduction of this wonderful race of bees is much to be regretted. It is indeed unfortunate. Mr. Cowan says he has begun, or is about to begin suit against some one for libel, all growing out of the Punic discussion.

It is the duty of the publications devoted to bee culture, to aid and encourage the introduction of new races of bees and to do everything possible for the advancement of apiculture. Just the reverse of this has been the condition the entire year. The Api does not "sit down" on progress. Both sides of all questions will be given. The editor has the courage to back up his conviction.

The British Bee Journal still adheres to its opinion that it knows of no such race of bees as the Punics. In a long

article from T. W. Cowan, in the *American Bee Journal* of a recent issue, Mr. Cowan fairly slays Brother E. L. Pratt. Well, do not be in haste to form an opinion on what T. W. Cowan says and don't you believe E. L. P. is knocked out. The API will show, by and by, facts that will convince all fair-minded persons that there are such bees as the Punics. This is all that can be told the reader at present on this point.

THE WEATHER.

The weather since November came in has been beautiful. Bees sporting in the warm sunshine nearly every day, while the temperature at night is hardly down to the freezing point. For a good many years, winter has not set in here in southern New England till about Christmas time.

DARK OR STEEL COLORED CARNIOLANS.

Has anyone in this country a pure dark Carniolan queen for sale? If so, address APICULTURIST, Wenham, Mass.

If such a queen can be found the experiment will be tried to see how many queens will have to be reared from her before her daughters and workers will be a golden yellow.

The method that will be used is this: A dozen or more queens will be reared. Two, possibly three, of the lightest bronze-colored will be selected for a mother queen. The young queens will be fertilized by drones from the yellowest mother. Queens will be reared from the young queens, and by the time this can be done, drones will be reared from many of the young queens. The drones from the yellow queens will be used to fertilize any young queens reared from the original or her progeny. As in the first selection, the young queens must be of the lightest in color and when the fourth generation is reached, the progeny, drones and worker bees will be golden yellow. Now is there not someone interested in this subject who will try this same experiment?

It has been stated in these columns that pure dark Carniolan bees cannot be reared in this country. For this reason no one may be able to furnish the desired queens.

PUNIC BEE ITEMS.

I am a honey producer, and not a queen breeder, and would take to any bees as soon as it would pay to keep them—even the wonderful Punic bees, which I have in my apiary, and have worked in their own Punic homes, without discovering the marvelous qualities described in the Bee Journal of May 23, 1891—[*C. B. J.*

This seems to indicate that there are Punic bees. Brother Cowan should hunt up the writer of the above (Ph. G. Baldensperger, Jaffa, Palestine) and make him explain what is meant by "Punic" bees.

As other proof of the existence of such bees as the Punics, the following extract from the same writer will show.

The Cyprian, Syrian, Palestine and Egyptian bees all sting. Do not the Albinos and "niggers?" I suppose very much depends on the climate in which they are bred, and how they are managed. For instance, Mr. Benton, some years ago, exchanged some Punic bees for Palestines, and he said: "Mrs. Benton says she would rather manipulate the 'ugly Palestines' than those 'Tunisians,' while I thought to the contrary. I find the 'Tunisians less liable to sting than the Palestines."

Here is a chance for Mr. Benton to put in a word. Mr. Benton seems to keep out this Punic controversy. He may come in later on and make things crack. The API is ready for the report of Mr. Benton, or any one who has any positive knowledge of Punic bees. It seems that Mrs. Benton found the Punic bees hard to manipulate, while Mr. Baldensperger had rather handle them than Palestines. As before stated in the API, Punic bees will sting, though the writer has never been stung by them.

One person may be terribly stung in handling a colony of bees, yet an experienced beekeeper will handle the

same colony and not receive a sting. Never persist in opening and removing the combs from a hive if the bees show a disposition to fight, but let them remain quiet for an hour, then try again.

A BUNDLE OF QUERIES.

Query No. 509.—What kind of bee is the Punic?

Reply.—According to a Hallamshire beekeeper the Punic bee comes from north Africa. It is dark in color, and, *from our limited experience of it, is a good worker and a prolific sort. We shall soon know more of this bee, as several persons are trying it.*

The above is from the *Beekeeper's Record*, June, 1890. The words in italics it is understood are by one of the editors (Mr. Cowan or Carr) of the *British Bee Journal*. Since the above query was published in the *B. B. J.* the editors have denied that they know anything about such bees as Punics. Just at present the API is not permitted to give all the information and facts it has bearing on this point.

Had the editor of the *American Bee Journal* noticed the above query and reply thereto no doubt his opinion as given in a foot-note to an article by T. W. Cowan, in a recent issue of that paper would have been a good deal more moderate in tone. It is not often such important matter escapes the keen eye of editor Newman.

If the editors of the *B. B. J.* know nothing about Punic bees what is meant by the words "From our limited experience of it (Punic bees) is a good worker of a prolific sort?" Will the editor of the *A. B. J.* or the editors of the *B. B. J.* tell the beekeepers of the world who the author is?

The British Bee Journal of Nov. 19, to hand. Tell your readers Brother Cowan it is a regular Bunker Hill.

T. W. Cowan, one of the editors of the *B. B. J.* says he has not cared to look at the API of late it contains so many advertisements. In the same issue of that paper is one whole page extolling a book written by the same T. W. Cowan.

No! T. W. Cowan does not care to look at the API; yet if one copy is lost in the mail he is mighty careful to call for another. Brother C. is bound to be sarcastic even if he must be so at his own expense.

"EDITORIAL AMENITIES."

In the *British Bee Journal* for Nov. 26th, the first article is an apology reprinted from the *Journal of Horticulture* of Nov. 19th, with a statement that they have been requested to insert it by the editor of that Journal. The apology was doubtless written word for word by Cowan & Carr, who backed up by an attorney dropped in on Dr. Hogg (the editor of the Journal), when alone, just as they were going to press, threatening him with an action for libel, if it did not go in the issue for Nov. 19, assuring him that all the facts stated were true. Dr. Hogg being too ill to verify their statements at once and not wishing to do them a wrong and thinking their representations *must* be *true* when backed up by an attorney, published it. The next day he learned how he had been imposed upon. Mr. Wright, on whom Dr. Hogg (who is now getting very old, and suffers much from ill health) relies to help him, was away from home at the time. The following extract from the apology combines the supposed facts.

"There was no mention of Punic bees in the *Record* of June, 1890, nor has there been any allusion to them either editorially or by any of its correspondents. There is also no statement in the *Record* for June, 1890, that Mr. Carr had a Punic stock in his possession, and he has never written anything about Punic bees."

By referring to the *Record* for June,

1890, the front page of which says that the editors are Thomas W. Cowan, F. G. S., F. R. M. S., etc., and W. Broughton Carr, page 74, you will see "A Bundle of Queries" asked by "Guillaume," *Wigtownshire*, N. B. No. 1 asks "What kind of a bee is the Punic?" The editors reply: "*Accoraing to 'A Hallamshire Beekeeper the Punic bee comes from North Africa. It is dark in color, and from our limited experience of it is a good worker and a prolific sort. We shall soon know more about this bee as several persons are trying it.'*"

You will thus see the editors speak of it from "experience of it," and speak of it quite favorably, too. W. B. Carr was sent two Punic queens in 1889 as can be proved by letters, only one of which he introduced and this is what he referred to when he wrote on April 17, 1890, "that it was one of the best and strongest stocks in my apiary to-day, brood in seven frames in a nine frame six inch two-story hive," which is printed in *Record* for June, 1890, page 69. Besides this there was another party that can be called as a witness to whom he (Carr) gave such a good account of the value of Punic bees that he wrote quite excitedly for a queen in August of 1890.

All persons who have a copy of the *Record* for June, 1890, can verify the truth of the statement set forth.

We are not alone in our opinion of the *British Bee Journal*. Prof. Frank Cheshire, perhaps England's best authority on bees, has no reason to be friendly towards that paper.

The motive which prompts the editors of the *B. B. J.* to deny the existence of the Punic bees cannot be accounted for. It really looks as though the reputation of these honorable gentlemen for truth and veracity had received quite a shock. As the API still has a large bundle of facts to present on this matter further comment is deferred till February issue. Permission to publish the above facts was given just as the API was ready for the press.

FRANK BENTON.

Frank Benton, who has for years been in Europe, and made a trip to Asia and "the Islands of the seas" to find new races of bees, is now in Washington, D. C. He is engaged by the Government in the Apiarian Section, Division of Entomology, Department of Agriculture. He is well qualified for the position. The Chattanooga (Tenn.) Times says:

Dr. C. V. Riley, United States Entomologist, has signified a desire to send Professor Benton next year to India, on a mission to investigate *Apis dorsata*, a species of bees of that country. No one else is so well fitted as he for the satisfactory discharge of such a mission.

Last spring he returned with his family from a residence in the Old World of eleven years, the whole of which time he devoted to the study and exportation of bees. He established apiaries, and lived for one or more years in each of the following places: Island of Cyprus in the Mediterranean sea; Beyroot, Syria, where his apiary was on Mt. Lebanon; Munich, Germany; Laibach and Krainburg, Province of Carniola, Austria; he also travelled very extensively, establishing an apiary on a French estate in Tunis, North Africa, and even penetrating, in the interest of apiculture, the jungles of India, where he contracted "jungle fever."

In addition to his special work he has been an ardent linguist, and speaks fluently German, French, Italian, modern Greek, and so on. At one time he was studying ten different languages.

Dr. Riley intends to put Professor Benton in charge of the whole matter of an exhibit in apiculture at the World's Fair. This is a fitting recognition of his ability and he can be depended on to make the most of the display. He is well known to some of our citizens, having lived for some time in Knoxville, Tenn., where he was instructor in apiculture in the University of Tennessee. —*American Bee Journal.*

APICULTURIST MAIL BOX.

HAS READ ALL THE BEE-PAPERS.

HENRY ALLEY: Find 75 cents for the API, 1892. I have been taking two other bee journals the past year. Shall take nothing but the API this year. I like it better than any other that I am acquainted with, and I have seen all the leading American bee publications.

Portland, N. Y. C. M. C.

I LIKE THE API.

H. ALLEY: Enclosed find seventy-five cents for API 1892. I like the API very much and think it among the very best journals published.

Anderson, Ind. J. W. MINNICK.

A GOOD JOURNAL.

MR. H. ALLEY: I received the sample copies of the AMERICAN API. It is a good journal. I take three journals and the API is the best of them all. I want API and queen; how shall I remit?

Garfield, Ill. CHAS. FORMHALLS.

Any yearly subscriber to the API will be given a 3 line ad. free, under the head of wants, exchange, etc.

The same can be run one year for $1.00 in addition to price of API.

If you have anything to sell or desire to exchange goods, you can do no better than insert an ad. in the API. Try it.

Send us three subscribers and $2.50 in cash and we will mail three copies of the API one year and present a beautiful golden Carniolan queen to the getter-up of the club.

For six new subscribers and $4.50 a warranted Punic queen will be given to the person who will take the trouble to get up a club of that number.

OUR NEW CLUB AND PREMIUM LIST.

We club the AMERICAN APICULTURIST with any of the papers below named. The regular price of both is given in the first column.

The American Apiculturist,	$0.75	
With Gleanings in Bee Culture,	1.75	1.50
" American Bee Keeper,	1.25	1.00
" American Bee Journal,	1.75	1.50
" Canadian Bee Journal,	1.75	1.50
" The Apiculturist and one sample Drone-and queen trap, by mail,	1.40	1.00
With sample Swarmer,	1.75	1.25
" Thirty Years Among The Bees and Beekeepers' Directory,	1 75	1 00
API and Italian Queen,	2.25	1.50
" " Golden Carniolan,	2.75	2.00
" " Punic Queen,	3.75	3.50

New subscriptions to Apiculturist will begin with Nov., 1891, number, and expire Jan. 1, 1893.

Money for queens need not be sent till the queens are wanted.

Five copies of API one year, $2.50.

Remit by money order on Salem, Mass., P. O., or by check.

Our new illustrated Price-list and Circular now ready to mail. Sample copies of API mailed free.

Address Henry Alley, Wenham, Mass.

All supply dealers should handle the drone-and-queen traps. Each dealer can in the course of the year dispose of thousands of the traps to his customers.

To facilitate the sale of the traps and present their advantages and practical use, the article of Rev. D. D. Marsh, on page 167, Vol. IX, No 12, will be put in pamphlet form, and furnished gratis to all dealers who desire to sell the trap. We will also insert in the same pamphlet a 1-page ad. free, to all who will purchase one dozen traps, flat, (price $3) or the same to those who will purchase royalty stamps to the number of 100 (price $5) for manufacturing and selling the traps. Try this, friends, and see what a boom you will have in the sale of goods of all kinds for the apiary.

The API will be sent free to all who will send us one or more interesting articles. Tell us what you and your neighbors are doing in beekeeping.

THE AMERICAN

APICULTURIST.

A Journal Devoted to Practical Beekeeping.

VOL. X. FEBRUARY, 1892. No. 2.

HOUSE APIARIES.

HOW AN EXPERIENCED BEEKEEPER WOULD CONSTRUCT A HOUSE APIARY.

I have read over carefully, the editorial article in December API and description of the house apiary and am sure the idea will work. I should like to try a house apiary myself. I imagine it would be very nice on some accounts.

Were I building one I think I would preserve about the same proportions that you have. I would arrange the roof somewhat like the roof of a passenger car having windows and bee-escapes in the upright part of the roof. I would make the walls double and pack with sawdust to the roof. I would have the sides on a wall as nearly as possible level with the surface of the ground, then put on six or eight inches of gravel inside for a floor, having everything tight at the botton, around the wall. I would have a bench about twenty inches from the gravel running lengthwise through the building, leaving about a foot on each side between it and the lower tier of hives, so as to sit on it when working with these hives and stand on it when manipulating the "upper berth" of bees. I would I think have a larger entrance than your inch hole in the side of the building and would arrange it so as to regulate it from the interior as well as ventilate, as you do, from the warm air inside the house. I would have over each hive, at least in the lower tier, a three inch hole with cone bee-escape on the outside and fitted with a "bung" on the inside, so as to admit light and air and allow the escape of bees when working at each hive. I would provide ample ventilation in the "car ventilators" at the top for the escape of smoke as well as bees and for the admission of light.

It seems to me now that I should prefer to have the hives set so that the sides of the frames would be to the wall, not the ends. Were it possible I would have one end open by a door into the shop or honey room and a space at the opposite end for a stove, either oil or coal. A good and large oil stove is not very expensive and is capable of adjusting to obtain any desired uniform temperature. They are now being manufactured much larger and more perfect than formerly.

Now a word about the when and why of the artificial heat. Of course I don't know much about artificial heat with bees, but until experience had taught me differently, I would never on extremely cold days heat the house above 25° or 30° above zero. I would try heating it slowly to 60° or 70° on any day in winter when the bees could safely fly. Too much heat in early winter or even in March might induce breeding too much. During the whole of April and May, artificial heat might I think prove very valuable. After the bees have well cleansed themselves and cleaned their hives in spring, I would keep the house 55° to 65° on days too cold for bees to fly and lower the temperature on those days that often come in early spring, when the chilly winds

kill the bees drawn forth by the warmth within and sunshine without. If we could by lowering the temperature within deceive the bees as to the state of affairs without at such times, it would, I am sure, pay. I would not be wooden and confine myself to a steady 70°, no matter what the conditions outside. I shall expect something valuable as the result of the building of your house apiary.

The story "that might have happened," related on page 175, is entirely within the bounds of possibility. An instance of the sort was related to me recently while on my visit in Illinois, by an aged relative. It must be true, you know, because — well, because it was a relative of mine who told it! He was engaged in teaming and had to pass a certain tree twice daily. On the down trip he noticed some bees flying around a hole some ten or twelve feet above the ground, and feeling that he had a bee tree immediately cut his initials in it and went on. On the return trip in the afternoon he was surprised to see a neighboring farmer beekeeper gazing intently at that tree, the trunk of which about the hole was covered with bees, and was told by the farmer that he had just followed a swarm from his bees into that tree. Now the question arose who owned the bees, the man who had first marked the bee tree in which there was now a swarm, or the one who had followed them from the parent hive. I think the makers of the laws never contemplated just such a state of affairs. And now in conclusion let me tell you not to forget to tell us all about how the house apiary works, its failures as well successes.

Agr. Coll., Mich. J. H. LARRABEE.

Bro. Larrabee hardly understands our house apiary as described in the December API. So far as the entrance holes are concerned, will say that one-inch opening will do for winter. In the spring if more room is needed, more holes can be made. There are a good many practical suggestions in Bro. L.'s article. Some of them will be adopted and applied to our present house apiary.

The bees should, in my opinion, properly belong to the man who followed and saw them enter the tree. The bees the "relative" saw were merely scouts, looking for a home for the swarm to occupy.—ED]

HOUSE-APIARIES.

THE ADVANTAGES OF HOUSE-APIARIES— WILL BEEKEEPERS ADOPT THEM?

House apiaries, have not had that consideration given them in days past, which they deserve, and for that reason, I am pleased to see that some interesting discussion is being carried on in regard to the matter. Serious objections have been made to bee houses, in the past, but these objections have in my opinion arisen not because such houses were "no good" in themselves, but that their arrangement and possibilities were not fairly understood. The day has gone by, when it will be strongly urged that bees can be wintered as well and safely without, as with some protection; and the time has already arrived, when the sure road to success as an apiarist can only be found in paying the closest and strictest attention to economy both in money and time. Bees can be, and are wintered safely on summer stands in single-walled hives, but the expense of so doing, is far greater than in well protected hives.

Such being the case, the question at once arises, whether the extra expense caused by properly protecting, is greater or less than the larger amount of honey required to carry an unprotected colony through? This question has been answered so often, in favor of the protected hive, irrespective of the question of greater or less liability of loss of bees, that I need devote no time to discussing it. We are now led to discuss the still more important question, of whether the expense of bee houses, or house apiaries, is or is not economy as compared with double-walled, chaff,

or other protected hives. And in discussing it, we find an important factor, viz.: the convenience that comes from its use. That the beekeeper himself can labor more conveniently and comfortably in a house apiary, than out of doors, either in summer or winter, there is no question of doubt; that bees can be as well protected, yes, and better, in a house apiary, as in any protected hive, no one will deny; and further that loss in bees comes in early spring, when it is unsafe to examine hives in the open air, is equally true.

Now, will, or will not, a house apiary, answer all the purposes of the protected hive, at no greater expense? In my opinion it will; if so, the further uses to which it can be put, the comfort and convenience found and enjoyed in its use, the fact that thorough examinations of the interiors of the hives can be made, no matter what the weather may be; the fact that early spring losses can be guarded against by their use, makes out to my own mind so strong an argument in their favor, that I expect ere long to find that beekeepers generally, in the colder sections have adopted them, and adopted them "for keeps."

North Attleboro, Mass. J. E. POND.

AMERICAN GOLDEN CARNIOLAN BEES.

In arranging my bee journals and papers for the last year, my attention was attracted by a "marked copy" of the *American Bee Journal* of Sept. 10, 1891, page 331, in an article by Henry Alley; the same being a reply to Mr. C. J. Robinson in regard to "Humbuggery in the queen trade." I suppose the "marking" was for the purpose of calling my attention to an extract from a private letter of mine to friend Alley, in which I spoke very favorably of a golden Carniolan queen, I had received of him, and of my intention to re-queen one of my apiaries with her daughters. My reason for re-queening with the golden Carniolans was the marked superiority shown by said queen and the queens reared from her, over any other bees I had ever seen or handled. The qualities in which they excelled, being gentleness, docility, beautiful color, honey gathering, and especially their wonderful building-up, or brood rearing qualities. I did not intend, expect or desire friend Alley to publish what I wrote. All who deal in supplies, queens, bees, etc., like to hear from their customers; as a well pleased customer, is the very best advertisement any one can have, and in that spirit I wrote, and what I said then I reiterate now, and with emphasis if that be possible. I might say right here that for the last two or three years, I have been gradually drawing out of the queen rearing and supply business, intending to give my whole time to the production of honey; but with only one partial crop of honey in four years, I am compelled to do more in the supply line than I ever intended to do again; and as I shall offer golden Carniolan queens for sale in their season for 1892, it may look as if I intended to "boom" them on that account, but when that endorsement was given, I never intended to raise another queen for sale if I could help it, and I endorsed the "golden Carniolans" and re-queened one of my apiaries with them, because I felt convinced they were worthy of it, and that I could not make a wiser or better investment of time or labor than in doing so, and I feel sure that time will prove I am right, in spite of all that Messrs. Robinson, Quigley, Andrews, Green and others may say to the contrary, and I am glad to say that I do not stand alone in my convictions. Such men as G. W. Demaree have as much right to be listened to, and reliance placed on their judgment as the ones who have been so prominent in their opposition to the efforts of friend Alley to give us something better in the line of good bees, and reliable queens. None of us are infallible; all are liable to make mistakes, but for one I had rather trust in the judgment and experience of one that had spent twenty to thirty years in *practical application* of his knowledge

than to those who in theory "know it all" but who never demonstrated a single statement, so far as is actually known. Let any unprejudiced person read friend Demaree's experience, as given in a late issue of the API, and Bro. D. surely has no axe to grind, and he will certainly conclude that friend Alley has as good backing in the position he takes in regard to "golden Carniolans," as the ones who so vigorously oppose him, and who in all probability never saw, or attempted to raise a single bee or queen of the strain they have so much to say about.

Belleville, Ill. E. T. FLANAGAN.

WINTERING BEES.

Last fall I had a very weak swarm little more than a nucleus, which I desired to keep through the winter, as it contained a queen worth taking some trouble to preserve. I furnished it sufficient storage, moved it a few inches at a time to a suitable location, where the land sloped, and then dug a hole to place it in so as to let the hive down about a third of its height below the surface of the ground, removing the earth from below the entrance. Afterward a board eight or ten inches wide was placed horizontally just above the entrance so as to keep that clear. Then I heaped the earth around and over the hive, much after the old-fashioned method of covering a potato hole, and spatted down the loose earth with the spade so as to shed water. A few loose boards were laid on the top to aid in protecting it from snow and rain. Finally a trench was dug around the mound, so that by no possibility could any water stand in or around the hive. The temperature about the bees will not probably fall much below freezing all winter, and madam, the queen, will pass the cold season as "snug as a bug in a rug." This method has proved very successful in other years.

In another part of the yard I had several colonies which I desired to give special protection. I moved them gradually together, arranged them with the fronts in a line, and treated them as I did the single one. It is a very convenient and inexpensive method of securing the safety through the winter of weak colonies of bees. I prefer it to the plan of wintering in a cellar, because the bees can fly freely when it is warm enough, and the hives are so covered that a little sunshine will not bring out the bees when there is such a chill in the air that they get low.

Trinidad, Col. F. O. BLAIR.

SHALL I SUBSCRIBE FOR A BEE PAPER?

This is one of those questions that will not down. It keeps coming up, and especially at this season of the year. During these long dreary months, of so much darkness, how shall we occupy our time to the best advantage is a matter worthy of some consideration.

The dense ignorant man, and he who knows it all will give themselves no concern about it, but to the thoughtful man of active brain it is quite otherwise. He must have something that is instructive and interesting to engage his attention, and since the bees—so fascinating to the true lover of nature—have ceased from their labors and are now tranquilly enjoying the fruits of their industry, the question arises what shall take their place.

When we are compelled to be absent from home and loved ones, are we not anxious for letters from those we have left behind? is not even the most trivial scrap of news read with avidity? Such being the case, I have no hesitation in saying, that nothing will so effectively bridge over the long vacant months of winter as the meaty and suggestive contents of a vigorous progressive bee paper.

As the old soldiers shoulder their crutches and show how battles were won, so the veterans in apicultural science, with their pens give us the rich fruits of their experience and observation, and what they have to communicate is valuable and well worth knowing.

It also lends an additional charm when the paper is conducted by one of long and varied experience, for then much that is irrevalent is consigned to the waste basket and the readers are furnished with nothing but the real cream of the matter.

But some are saying the last season was so unproductive that really we cannot afford this luxury, and there is no hiding the fact that to many last year the bee business was unprofitable, but granting this would it be wise not to subscribe for a bee paper? Nay, would it not be better to reduce expenses any where else rather than in this? For, apart from depriving yourself of a real pleasure, would not such a policy prove in the long run suicidal in many ways to your interest?

When the merchant's speculations bring the balance on the wrong side he does not reduce expenses by cancelling his subscription for the Journal that gives him a report of the markets. The same things might be said about farmers, mechanics, and professional men: they all have special papers bearing upon what is most interesting and vital to their success, in a word indispensable, so that wherever there is retrenchment, it certainly is not here. If then these feel the need of instruction and stimulation from the perusal of their papers, is it wise for the enterprising beekeeper to go without his?

For it is no exaggeration to say that an article, or even a single paragraph may throw such light upon for *e. g.* the introduction of valuable queens, or the ripening of honey, or the marketing the same to the best advantage, etc., as would pay a handsome dividend upon the small investment.

Many make the queen the chief factor in successful bee culture, and on the whole she is likely though to the progressive beekeeper a first-class bee paper is a *sine qua non*.

In answer to the question "Shall I subscribe for a bee paper?" I would say you need not if you are quite sure you can afford to do without it. WILKIE.

CYCLONES.

Miss Emma Wilson describes the hubbubs in the apiary, true to life, in *Gleanings*, Dec. 1st, when she calls them "cyclones." We have often remarked that our apiary looked as if a cyclone had passed through after our removing the bees to the cellar, or when an unusual amount of work had been done with them such as taking off supers or putting sections on.

I don't think we encourage the cyclones so much as we used to. We find it easier to pick up after each day's work, than it is to pick up after several days' work or, if one will take but a little more care at the time of stirring up, much confusion may be prevented. For instance, when we take off surplus, etc, pile them in piles as we go along; and when we go into the storage house always make it a point to carry an armful in and pile them up in their proper place, instead of dropping them all down together, where most convenient, as some help are prone to do, and as we ourselves are tempted to do; and always when walking around in the apiary keep on the lookout for something to do, as well as observing the hives. In this way we shall keep much of the cluttering up done.

I learned a lesson of thoughtfulness and observation more than ten years ago that has been useful to me ever since. It was a dear lesson as experience often is.

After the hurry of the season was over on walking round through the apiary I found several colonies of bees had built combs under their hives and had filled the combs with brood, but as the space was so small the combs were so narrow they would not amount to much when transferred into frames. The colonies had badly dwindled. If we had been more observing, these colonies would have been noticed before, as probably we had passed and repassed those same hives several times, perhaps twenty times. One reason we had not noticed them was a few bees were still left in the hive, I think in every case enough to protect

the combs from being robbed out. But if we had been as observing as we ought we would have noticed bees coming out from the sides and the back of the hives; but as it was we did not notice anything wrong until we saw the white combs peeping out at the sides. That spring we had had excessive swarming and probably they had swarmed when no one was around and the queen had run under the hive; the bees returning had followed her.

We have had a little of the experience of Mrs. Kit Clover in her search for the swarm hiver until we now have a basket where we go direct and put each queen cage in and all little fixings for the bees or a room for the larger things instead of having a few things here and a few there all over the house.

It is a little amusing how one will start out after an unexpected swarm to catch the queen, especially when they swarm early in the season before swarming preparations were made. I have quite a number times seen a swarm coming, I would not even wait for a bonnet but would run bareheaded with my sleeves rolled up to hunt for the queen, and call some one to hunt up the queen cage, light me a smoker, bring me a bee hat, and take care of the bread in the oven, etc., but generally I have everything in readiness.

The two years past we have had scarcely any swarms, three or four I think are all. When we again have good years for honey we shall have plenty of swarms. I have not much faith in breeding a race of bees that will not swarm, but we may discourage swarming by giving plenty of surplus room in time and in destroying old queens.

I hope by the time we get swarms again that somebody will invent a way to prevent the swarming fever.

Roseville, Ill. MRS. L. C. AXTELL.

BEES DID NOT DO WELL. (?)

Bees have not done well in this locality. I had a little over five thousand pounds from 250 colonies.

Oronoco, Minn. G. W. WIRT.

RACES AND STRAINS OF BEES.

In speaking of the different *races* and *strains* of bees, it seems the terms have but little meaning. Take for example the Italian race. We may buy queens from a dozen different breeders and we shall get as many different strains of bees. No two have the same kind in every particular, some having characteristics as well as color and markings entirely difierent from the rest. I have purchased queens from about all the noted breeders more or less for the past fifteen years, and can scarcely find two with the same markings and qualities. The Italian seems to be a hybrid, or cross of races, with a strong tendency to "sport," and the consequences are we have in the so-called Italian race of bees, all shades of coloring and markings as well as characteristics imaginable, with no permanency whatever of characteristics or markings. I have found that in buying the Italian queen of to-day as advertised by our different breeders that I cannot tell what will be the qualities, color or character of my intended purchase until I have tested them in my own apiary for a year or two at least. I find some that build beautiful combs, cap their honey white, not excessive swarmers and good winterers. I find others that are poor comb builders, cap their honey dark, excessive swarmers, poor winterers and are no good. I also find a great difference in their color and markings, varying all the way from a bee so dark as to be disputed that they are Italians, to a color so light that that they are called Albinos. Now, why all this difference? To my mind it is evident that originally the Italians were a pure black race (probably Punics) and a pure yellow race (likely the golden Carniolan) and from these two races have sprung all other races or strains of bees.

Eight or ten years ago I imported a Carniolan queen from Mr. Frank Benton; her workers were mostly dark with slight traces of yellow on some of them but I found on raising daughters from her

they produced bees so yellow that I could not tell them from Italians and as they were excessive swarmers I quit raising them.

Now under the present state of things as the Italian is bred to-day, with all the variation there is in their color markings and characteristics, is it not true that the term "Italian bees," have but little or no meaning? and if so, is it not time we had some standard, some particular markings, color and characteristics to breed for and and expect in a race of bees with a given name? Perhaps the greatest difficulty to overcome would be to get a sufficient number of queen breeders to agree on what should be the particular color, markings and characteristics of such a bee. I don't think there would be much difference of opinion as to what the characteristics of the ideal bee should be. I think the greatest difference of opinion would be as to what particular color and markings, if any, the ideal bee should possess. Some would no doubt claim the color has little to do with their nature and character; while others would assert that it has a great deal to do in the matter. I would be one among the latter class. I have long contended that the color and markings have nearly, if not *all* to do in deciding the nature and characteristics of bees. I have made it my special study for some years in regard to the color and markings as a means of deciding the character or qualities of bees. I believe it possible for an expert in the matter to judge of their character simply by examining the color and markings, and do it as easily as a phrenologist can read the character of different persons. I think there should be some standard given that we might all adopt— *American Italian bee*, one that would possess all the desirable qualities with a certain well-defined color and markings, so they would be known from all others by these colors and markings. I may, in a future article give description of my ideal bee.

Waynesburg, Pa. W. S. VANDRUFF.

Well, friend Vandruff, you as well as a large number of prominent beekeepers have got around to the opinions expressed editorially in the API concerning the original yellow bees. The API expresses no opinions inconsistent with facts and experience—wild absurd statements and opinions are not what beekeepers desire or relish. The people guilty of these things are those who have tried to prove without properly investigating or considering the matter, that the Italian bee is a fixed race. Your article is important as it indicates you have given thought and study to a matter that bears upon one of the live subjects of the present time.—ED.]

YELLOW BEES IN CARNIOLA.

By referring to the *A. B. J.* for August 8, 1888, or *British B. J.* for August 23, 1888, you will find a letter from Mr. Frank Benton, in which he says: "I have yet to see an apiary in Carniola where yellow-banded bees do not exist. There is, in this race, a tinge of yellow blood that creeps out every now and then, do the best one may." He gives also the testimony of two other persons, that bees with orange or rusty red bands had always existed all over Carniola. Mr. Benton also gives other information on this matter in the *B. B. J.* for Sept. 20 and Nov. 1, 1888. E. L. PRATT.

Brothers Quigley, Green, Robinson and others are especially invited to read the above carefully, and comment thereon.

If much more evidence comes to hand of the existence of yellow bees in Carniola, I shall begin to think after all I did not do such a smart thing in developing the golden Carniolans Well it does begin to look as though my opinion concerning the original yellow bees is about right. It looks too, as though any one so disposed can produce golden Carniolans without intermixing the races.

I shall be glad to publish in the API comments on the above from any of the gentlemen whose names are mentioned herewith. I expect the day is not far distant when all the above-named friends will take sides with me on this question.—ED.]

A GOOD LOCATION FOR BEES.

AN INTERESTING LETTER FROM A VIRGINIAN BEEKEEPER.

I am not much of a writer, but I love bees and honey and in behalf of them I shall try to write a short article, and after being boiled down sufficiently hope there is enough left to publish. In my vicinity bees have done fairly well, if I may be allowed to judge from my own and those of my nearest neighbors. Mine gave me a surplus of forty pounds in one-pound boxes per colony and one swarm each. Several colonies swarmed the second time, but I put them back in the parent colony. I believe that bees will pay here if worked for honey alone. I have never known a season that if bees were properly managed, they did not pay a good per cent on capital invested. What we need here is some one to boom the business, and by this I mean having that kind of grit that will make things go. In a humble way I am trying to encourage the introduction of improved strains of bees. The farmer is looking to the improving of his cattle and his hogs, and must the beekeeper stand still and be content with the common blâck bee? I say no, let us look to our interest and procure the best strains of bees and encourage anything that tends to raising apiculture to a higher standard. To-day, Dec. 25, my colonies are carrying in pollen from alders, and bees working nicely. How does that sound to you beekeepers of the old Bay State?

Lynchburg, Va. L. R. WEBB.

INTRODUCING QUEENS.

I am very much obliged to you, Mr. Alley, for the sample copies of the API. I learned from one copy how to introduce queens successfully with tobacco smoke. The information is worth a good deal to me. Each year I rear a few queens to sell to my neighbors and introduce them myself. Since I received that sample copy of the API, my method for introducing queens has been this: I dequeen a colony, close the entrance to hive and blow in among the combs and bees a few puffs of tobacco smoke. The queen is liberated and allowed to run in at the entrance. As she does so I blow smoke on her. When she has run in the hive more smoke is blown in. As soon as the bees begin to drop to the bottom-board, I cease smoking them.

I would caution all who use this method to do it in the evening, or cover the hive to protect the colony from robbers. I have not lost one queen by the above method. I make no preparation whatever, except to put a queen, tobacco and smoker in my pocket. All the queens from other parties, whether fertile or virgins, are introduced in the same way.

You may have made a great mistake in introducing the Punic and golden Carniolan bees, as T. W. Cowan and some of your American friends (?) would have us believe. There is one thing sure, there is more good practical sense, facts and pointers in one square inch of the API than some of those old fogies and croakers can give us in a life time. I for one will stand by the man that gives us such good practical advice and helpful methods of such great value.

WILLIAM ELLIOTT.

Plainview, Minn.

QUEEN BREEDERS.

A GOSSIPY LETTER ABOUT BEES, ETC.

A correspondent of the *American Bee Journal*, complains bitterly of "queen breeders." He clubs them altogether and says, "there is something radically wrong with the breeders of this country."

He has purchased "warranted and tested queens and out of the lot but one was prolific."

There is a great deal of innocence exhibited along this line of queen excellency. There are certain things that

the experienced beekeeper may know concerning the bees he rears and sends out to his customers, and there are other things that he cannot know in advance. He is supposed to know from what stock he breeds and if he is observing and careful as all honest queen breeders are, he knows if his queens are well developed, for on this depends their usefulness in way of prolificness and longevity. But he cannot know what may conspire to injure the queens in the mail bags and destroy their prolificness. There is nothing in the form of freight handled by "common carriers" that receives the rough usage that the mail bags do. The other day I saw a "mail boy" throw a mail bag at a negro man; it struck the darkie about the shoulders and bounded off on to the stone platform with a thump sufficient to jar the life out of queens and bees, however well put up.

The thing that has surprised me most is the fact that so few queens are injured when shipping them. In my experience as a queen breeder, I have been much gratified to know that nearly all the queens I have sent out have given good satisfaction. The so-called "cheap queens" from my breeding yard are simply young queens just beginning to lay eggs. They are from selected stock and are only sold cheap because they are taken immediately after they are mated, thus giving room for other young queens.

I have had as much to do with queen breeders as most beekeepers and I know of no class of men who try harder to please and do justice to all.

SWARMING, IS IT ABNORMAL?

Rev. W. F. Clark of Canada is nearly ready to affirm that swarming is an abnormal condition. In my opinion, abnormality is more likely to get into the mind of the bee philosopher than into the economy of the bees. There is certainly no such thing as normality when applied to bees in the sense of fixedness of condition. The economy of life in the bee-hive consists of a variety of conditions. A colony of bees with queen and brood in the breeding season is in normal condition. The same in the winter season without brood is also normal. A swarm, with queen just hived without combs and brood, is in normal condition, and a colony that has cast a swarm, having brood and queen cell, is in normal condition. All these conditions are natural to bees, and therefore "normal."

Swarming is nature's method of not merely propagating the race, but scattering the race and disbursing it throughout the land, and what is *natural* is *normal*. If the times and seasons are propitious, there is no way to suppress swarming without changing the condition of the bees. This I do by my new manipulation without effecting the normality of the colony. Just before swarming time I transfer the combs of brood above the zinc queen-excluder, giving the queen a new brood nest below the excluder. Thus the condition is changed without effecting the strength of the colony or throwing them out of normal condition. The only objection that has been raised against my plan of preventing increase by preventing swarming, is the much room it takes, and that it crosses the dwarfing contraction system. I hold that a hive can never give too much room as long as it is filled with bees to the crowding point. The greatest difficulty I have to overcome is an *empty brood-chamber* at the close of the honey season, the surplus cases having caught all the honey. There is want of information in the minds of those persons who imagine that the queen is "crowded out," during a good honey flow. An admirable exhibition of nature's economy is displayed in connection with a profuse honey flow. It is seen in the removing of all hindrance to the special work of gathering in the flowing nectar. The queen is not "crowded;" she voluntarily checks her activity in the brood-nest that nothing hinders the harvesting.

I have had ample opportunity to observe these matters during many great

honey flows, but more particularly when feeding back to have incomplete sections finished up.

It is a noticeable fact that colonies that are handling a flow of honey from the feeders, when "feeding back," will rear less brood than colonies that had been gathering only a few drops of nectar daily from catnip and other scattering flowers.

FULL SHEETS OF COMB FOUNDATION.

Mr. Z. T. Hawks in "Api" is hard on full sheets of foundation. I agree with him concerning full sheets in sections. My experience with feeding back liquid honey to have sections built has taught me that little is gained by full sheets in the sections, and the quality of the honey is injured. I only use starters in the sections.

But when I want a large number of combs for the extractor I have found it the cheapest and best way to have them drawn from full sheets of foundation in the upper stories. Otherwise, I think it too expensive to use full sheets of foundation indiscriminately as many beekeepers do.

SUGAR FEEDING, AND WHO CARES?

It may be very philosophical in Sister Axtell, to "don't care who knows it." But I *care* when people refuse to buy my honey because Mrs. A. and others, "feed sugar and don't care." Mrs. A. wants to do right. I cheerfully grant her full credit for that, but she can't feed sugar as she advocates, without selling "sugared honey," if she sells any. No man ("nor yet a woman") can prevent sugar from going from the brood-nest to the surplus.

G. W. DEMAREE.

Christiansburg, Ky.

ONE OF THE BEST.

Mr. Alley: I got an Italian queen from you that turned out well. She is very prolific and the bees are the best honey gatherers in my apiary.

Sedalia, Mo. FREDERICK SCHACH.

WONDERFUL, WONDERFUL!

Mr. Alley: Enclosed find 75 cts. for the Api 1892.

The queen you sent me is doing fine. She filled her hive full of bees. On January 1, 1892, the bees from this colony were strong and carrying pollen. Drones were also flying from this particular hive on that day.

Morris X Roads, Pa. JOHN BAKER.

(*From Gleanings.*)

It has been observed that bees will winter on honey-dew; but just how much better they would have done on sugar syrup is somewhat of an open question. Here is a little item in point, from a subscriber, Mr. E. E. Smith, of Carpenter, Ill. He writes:

Bees wintering on honey-dew are rearing brood; but there are about twice as many dead bees in front of their hives as there are of those fed on sugar syrup.

Yes, and when spring comes, there will be 100 per cent more dead colonies with those wintering on honey-dew than among those wintering on sugar syrup.

BEEKEEPING IN KANSAS.

Mr. Alley: — Have been thinking of writing you on the bee question for some time, so here goes.

I am somewhat of an amateur in bee culture, never have made a "howling success" of the business—have been dabbling with bees off and on for about twenty years. Was a very enthusiastic student in the seventies trying to follow Quinby, but was obliged to follow other business to make the financial part come out right.

My early experience was in New York State and the later in Kansas where I am meeting with some success.

Last year, 1891, I spent 8 months in Cal., studying the subject from a practical point of view. California is a fine honey region especially the southern portion of the state; as high as 400 stands are frequently seen in one apiary, quality of honey from the sages very fine; but to return. Last spring I purchased 16 colonies of bees in L. hives. Fifteen stands were worked for extracted honey, but no increase; the one was increased to 5 and secured 75 lb. comb honey and 100 lbs. extracted. Took from the 15 stands 2600 lbs. extracted honey. Now I have 20 stands all in good shape for winter. Our surplus honey season begins about Aug. 15 and ends Sept. 25.

I extracted about once a week during the honey flow. Our honey is rather dark in color but very good flavor.

My scale hive gained 12 lb. on Sept. 10, and 13 lb. on Sept. 11, which was the highest daily gain. Bee pasturage is almost wholly from wild flowers. Extracted honey sells quite readily in our local market at 7c.

One word in regard to the Alley drone-and-queen trap. With me they are indispensable. I clip all the queens but in attempting to swarm a queen is frequently lost (as they cannot crawl back into my hives), so when that happens I just place a trap on that hive until the young queen is ready to mate and in this way do not lose the bees as they might swarm and go off with the young queen. They are also very convenient for holding a new swarm where you put them, as I know from experience.

Your direct method of introducing queens, as you probably know sometimes fails. The queen I received from you the past season was placed in one corner of brood frame and the bees given access to the candy after removing the old queen.

On examining five days later no queen was to be found but plenty of cells and a queen was reared in due time.

The next day after the queen was placed in the hive, we had a hail storm and the following three or four days were cool and windy with the honey flow cut off which in my opinion was the cause of the queen being destroyed. Please tell me if I am right.

If the Punics prove to be the coming bee, what will be the result? Won't the queen excluders have to be changed to accommodate the difference in size?

Dewey, Kansas. M. J. WILSEY.

Queens are sometimes lost by any method of introduction.

No, the queen excluders will not have to be changed where the Punics are introduced. Punic worker bees may be a little smaller than other races, but the queens are as large as other queens.

Regarding the trap will say that there are now 100,000 in use, and they give general satisfaction. In fact, there is no article used in the apiary that gives such general good results and work so perfectly.—ED.]

I THINK IT A 1.

H. ALLEY, ESQ.: I use your drone-and-queen trap and think it A 1.

Brockville, Ont. Can. W. M. OSBORNE.

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EDITORIAL NOTES.

Winter is here. It came with the first week in 1892.

The bees in the Bay State house-apiary are in fine condition. By the way, there are on the API list several articles on "house-apiaries" as well as quite a number on "wintering bees" that will appear in later issues.

The *Farm Journal* is one of the best monthly agricultural papers published. The API and above journal will be mailed one year for 90 cents. Any one who desires to see a sample copy of the *F. J.* can do so by sending their address to this office.

The best moth-excluder, the *Beekeepers' Magazine* says, is the bee. Right. — *Dr. Miller.*]

What is new about that? The idea is as old as or older than the name of the new bee paper, and all know that is very old.

W. C. Frazier of Atlantic, Iowa, speaking of the markings of Italian bees says: "I have never been able to find a single bee with only *one* yellow band." Suppose Bro. F. you import a few Italian queens and then test them, you will find plenty of workers that have but one yellow band; at any rate such is the experience of all who import Italian queens.

If Prof. Cook does not laugh when he reads *Gleanings* for Jan. 1, it will be owing to his having la grippe badly.

A fellow must look over the illustration of Prof. Cook's museum on page 12, a long time before he can take it all in. Rambler's comic illlustrations knocks Puck clean out.

In the Chelsea (Mass.) Police Court, David Hollandger of South Boston, for selling honey adulterated with glucose, was fined $50.

That's how a swindler is punished in Massachusetts when detected in cheating the public. How would it do for beekeepers in each state to petition their respective legislatures to enact such a law regarding the sale of adulterated honey as Massachusetts has?

G. W. Demaree expresses the same opinion as the API often has, that the principal cause of queens being unprolific is owing to the rough handling in the mails. Yes, it is true that some queen dealers do not exercise as much care in selecting the most promising queens and having only such fertilized. Poultry fanciers and in fact all breeders of horses, cattle, or of any animals, know that there is a great difference in the quality of the undeveloped young animals.

"Dangerous advice" is what the *C. B. J.* terms the advice of the *B. B. J.* to disinfect the combs of foul-broody stocks with the fumes of burning sulphur, said combs to be then used as safe.—*Dr. Miller.*]

Yes, it is dangerous to meddle with foul broody combs in any way. Destroy them as quickly as possible. Don't waste time in trying to cure a colony that has foul brood, or any other incurable disease.

La grippe seems to hold its grip on Thomas G. Newman, editor of the *American Bee Journal.* The API extends sympathy, yet it cannot do so from any experience with la grippe. The only thing that ever made an attempt to get a grip on the proprietor of the API was tried the last year. Quigley, Robinson & Co. intended to get a solid foothold here. The editor of the API happened to be in such fine condition that the scourge was easily and quickly repulsed. Another visitation of the golden-yellow fever is looked for on the return of warm weather. The disease will frighten no one, as it is so easily managed and put to flight.

The editor of the *Review*, says a western bee-paper, was the first to "show up" the yellow Carniolans. This is another one of Bro. Hutchinson's mistakes.

THE APICULTURIST was the first bee-paper to "show up" the Carniolans. The API will continue to show them up by publishing testimonials from those who purchased them. Did Brother H. read the testimonial from Mrs. L. C. Axtell in a recent issue of the API? Now Bro. H., if you really desire to be fair, just insert in your paper what Mrs. Axtell says of the yellow Carniolans. Try and be fair in your opinions and criticisms. "Don't forget your remarks on "berating" people you recently applied to the editor of this paper.

The *A. B. J.* has no less distinguished a correspondent than Thos. Wm. Cowan, of the *B. B. J.* The occasion was an article in favor of Punics, and Mr. Cowan rather more than hints that there are no such bees.—*Dr. Miller.*]

Which side of this question will T W. Cowan land on? First he states to the readers of the *B. B. J.* that there are such bees as Punics, "as several beekeepers are trying them," and later on says he knows nothing about them. Now the API is informed that this distinguished correspondent of the *A. B. J.* proposes to visit Tunis to satisfy himself that there is or is not such a race of bees as Punics.

Brother Cowan seems to go to considerable trouble to demonstrate the truth or falsity of a question he long ago settled—*in his own mind.*

Rambler's description of Mr. Jacob Timp's apiary is quite rich. Here it is:

Mr. T. had his yard full of hives and nuclei, and was raising queens at a high-pressure rate. We first had the impression that the hives were arranged by driving a load into the yard and letting them drop out at the rear, as we once read in *Gleanings;* but Mr. T. didn't do that way. A cyclone must have picked up a hive here and there in various States, with a few board fences and chicken-coops, and landed them all in Mr. T.'s yard.

Well, a fellow who is rearing queens on a large scale will have a hard looking apiary in any event. Those who visit the Bay State Apiary may think the above description may apply to us. With the exception of parts of hives that lie scattered about, the Bay State apiary is, as a rule, in fair condition. The only way a large queen-rearing apiary can be kept in order is for a person to follow the apiarist and clean up after him.

The following editorial item appeared in the January issue of the API. It was corrected to read as follows:

The great convention has met, and was a grand —— as will be seen by the report of its proceedings in this issue. Many of the prominent beekeepers of America were present.

The word originally used in the blank space was success. The API was not certain the convention was a success and not desiring to express an opinion, success was crossed out and typo was requested to leave the space blank.

Authors and editors are given what is termed a make-up-proof, and on this are made the last corrections before the paper goes to press.

Brother Ernest Root has an idea that the editor of the API does not see a make-up proof for corrections. Well, he does, but that does not prevent mistakes. The API is printed six miles from Wenham, and it is not convenient to be in the printing office all the time.

Subscribe for the API.

The Punic bee "fad" is fast fading away. The Italian is probably as near perfection, as a race, as any we shall ever get. Let us breed for longer tongues, earlier and later workers, good winterers and nonswarming bees, and who can foretell the result? —*W. M. Barnum.*]

Want to know if it is. Call around at the API office and look on while the morning mail is being opened and you will have reason Bro. B. to change your opinion regarding the "fad." The indications are that the call for Punics, or the ebony bees the present year will exceed the supply. Every mail brings orders or notice from some beekeeper that he shall try the Punics the coming season. Those who do so are wise.

The Punics possess all the points mentioned and so much desired by Bro. B. Brother Barnum should write about subjects on which he is posted and understands. His subject, 'Rambling thoughts' however, was quite appropriate to the remarks he made. The above quotation was one of those "Rambling-thoughts." There are too many so-called beekeepers writing articles under the same head as Bro. B. When a person has no subject to write about, the pen should rest. One thing is certain, Bro. B. has no personal knowledge of the good or bad qualities of Punic bees. Purchase a Punic queen Bro. B., then tell the beekeeping public what you know about them.

BUSINESS ITEMS.

Renewals and new subscriptions come in by every mail. Read the offers in our new catalogue, which is mailed free to all who apply.

NOTICE TO OUR SUBSCRIBERS.

Quite a number have written that they would like to renew their subscription to the API, but could not remit in advance. Will say to all such that the API will be mailed and remittance may be made at any time before July 1, 1892.

To those friends who have renewed their subscriptions to the API, and especially to those who sent a new subscriber with their renewal, the API returns thanks. Keep on in the good work and the subscription list of the APICULTURIST will soon be second to none.

If any readers of the API know of a beekeeping friend they would like to have see this copy of our paper just send the address on a postal card and one or more copies will be mailed.

The new advertisements in this issue are by Jennie Atchley, Dr. C. C. Miller, F. M. Taintor, who has the largest bee-hive and supply factory in Massachusetts, E. T. Flanagan, Wauzeka Manuf'g Co., George H. Stahl, Bingham & Hetherington who have enlarged their ads., also W. R. Stirling, G. A. Lamon, W. G. Row, E. L. Pratt and G. J. Stringham.

SELECTED.

GIANT BEES OF INDIA.

BIG INSECTS TO BE IMPORTED

An Experiment of the United States Department of Agriculture—Bumble Bees in Australia — The Honey Makers.

A Washington despatch says: The Department of Agriculture is about to send an expedition to India for the purpose of procuring certain giant bees which are wild in that country. They are the biggest species known in the world, and they build combs in the forests as large as ordinary house doors. These huge combs, hung from the limbs of lofty trees, or from projecting ledges of rock at a high altitude, give enormous quantities of wax. Bee hunting is a profession in India. The bee hunters wear no clothing save breech-clouts. They have a superstitious fear of the insects. Though dreading to encounter them on fair terms, they are very skilful in attacking their nests by stratagem. Their usual method is to climb the tree, from a high limb of which the comb depends, swinging below the hive a long stick with a bunch of ignited leaves on the end of it until the bees are driven out, many of them falling with singed wings to the ground; but the majority ascending into the air above the comb and hovering in a cloud. This opportunity is taken by the seeker after spoil to cut away the great comb, which he quickly lowers by means of a rope to the ground below. One gets a notion of the vast quantities of honey and wax collected in this manner from the stores of the latter material to be seen in the warehouses and shops of the cities, tons upon tons of it together. It is an article of

EXTENSIVE EXPORT FROM INDIA.

The proposition is to fetch these bees to this country and domesticate them if possible. If they could spread their swarms in the semi-tropical forests of the United States, they might be made to supply considerable crops of the finest and most valuable wax. Curiously enough, the drones of this species are no larger than ordinary bees, and this fact affords reason for hoping that they will mate with the females of stocks already acclimated here. These wonderful insects from India have longer tongues than are possessed by other bees, and the belief is entertained that they could secure from many kinds of flowers, honey which now goes to waste. Dreadful stories are told in the country where they belong of their extraordinary ferocity and of attacks which they have made upon whole villages of people, with fatal results: but the fact has been demonstrated that capable beekeepers can handle them easily and safely. Considerable numbers of bumble bees have recently been imported from Europe into Australia and New Zealand. Hitherto, growers of red clover in those countries have been obliged to obtain seed for planting each year from England, because the crop produced no seed for lack of bumble bees to fertilize the blossoms. Bumble bees find in

red clover their favorite diet, and without their aid in distributing pollen, this plant would soon perish off the face of the earth. Finding it very expensive to import their red clover seed annually, the farmers of the countries mentioned

DECIDED TO PROCURE BUMBLE BEES

for themselves. Accordingly a lot were taken while in the hibernating stage, during cold weather, packed in moss, and carried over the ocean in the refrigerator compartment of a ship. They were set loose on arrival, and already they have multiplied so numerously in that part of the world that it is feared they will become a nuisance, by consuming all the flower juices which the honey bees require for their own purposes. It seems to be the same way with every sort of animal that is introduced into Australia — invariably the beast, bird or insect proceeds at once to flourish to such an extent as to upset the normal balance of creation. Bumble bees are generally supposed to be of no particular use in the world. It is not their fault. They are active and industrious honey gatherers, but there are never enough of them in one colony to make a store that is worth taking. When winter comes the queen bumble bee seeks a place in the ground for hiding safely during the cold months. She finds such a spot beneath moss, or perhaps in a heap of leaves. There she hibernates comfortably, remaining fast asleep until spring arrives.

(*To be continued.*)

SUCCESS DEPENDS UPON LITTLE THINGS.

Success in honey producing always depends on an indefinite number of little successes. If we can imagine that our apiary of 100 colonies represents a great plant or factory of 100 hands, every one of them being perfectly drilled and equipped, and capable of performing a certain amount of work, we can see how it is when one to three, or more colonies become demoralized, right at the beginning of a honey-flow. The aggregate business suffers in proportion to the small failures. If we prepare an apiary of 100 colonies of bees of the best strain for the honey harvest, we shall have to manage them with more than ordinary skill, if more than fifteen per cent. of them do not waste their time and opportunities, sulking in great clusters on the front of the hive, or by indulging in excessive swarming, or refusing to stay anywhere long enough to settle down to business.

Perhaps no apiary can be managed at times so effectually as wholly to prevent loss from the causes I have named, but by the proper knowledge of the nature and habits of bees, this loss can be reduced. — G. H. KIRKPATRICK, in the *Indiana Farmer*.

PUNIC AND MINORCAN BEES.

On page 535 is an extract from the *Revista Apicola* stating that the Punic or Minorcan (or more correctly Balearic) bees are one and the same. The editor and writer of that paragraph, F. C. Andrew, has several times written to the *British Bee Journal* (viz.: in 1886, pages 169 and 282; and in 1887, page 564), that these bees are like Italians, and "wear the 3 classic gold bands;" that they are "as like Carniolans as two peas." Mr. Cowan wrote, on page 573, for Nov. 29, 1888, that they are "almost black." It is true that Mr. Andrew corrects himself in that number, on page 280, but it is hardly fair to quote as "good authority" a writer who can make so many mistakes in the matter. Much is being made out of the meaning of the word Punic. All classical scholars know that it means "belonging to or appertaining to the Phœnicians; a people whose capital was Carthage." I have several times stated where they came from, and who first sent them to me, but it suits some to ignore these facts.

Sheffield, England, Nov. 4, 1891.
American Bee Journal.

ADVERTISEMENTS.

I have prepared an illustrated circular which willbe mailed free to all who desire my Italian, golden Carniolan and Punic queens. Punic queens reared from imported mothers only. Prices of hives, smokers, drone-traps, automatic swarmers, foundation, and in fact of all necessary articles used in the apiary given in my list.—HENRY E. ALLEY, *Wenham, Mass.*

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Send for a free sample copy of ROOT'S handsomely illustrated, Semi-Monthly, 36-page, GLEANINGS IN BEE-CULTURE, ($1 00 a year) and his 52-page illustrated catalogue of

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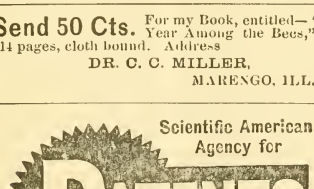

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THE AMERICAN APICULTURIST.

A Journal Devoted to Practical Beekeeping.

VOL. X. MARCH, 1892. No. 3.

THE DESIRABILITY OF PRODUCING A LARGER RACE OF BEES.

DEAR MR. ALLEY: — In the APICULTURIST for February, 1891, Mr. Calvin W. Smith of Wellesley Hills, Mass., made a suggestion as to the desirability of producing a larger race of bees, with the idea that these larger bees would be able to carry larger loads and perhaps fly faster and farther and moreover having a larger proboscis, would be able to gather honey from the red clover and perhaps some other flowers which are inaccessible to the bees which we now have.

In working for improvement in the size of bees, I do not believe that much would be gained by always using new comb for the brood as suggested by Mr. Smith. It does not seem to me that the size of the cells has very much influence upon the size of the bees raised in them. Every beekeeper has seen drones raised in worker cells, and it would evidently be possible to raise workers as large as drones in the same cells. Improvement in the size of bees must be gained in the same way that we would proceed to improve the size of any animal; by careful selection and breeding only from the largest individuals and it is my belief that if the size of bees should be perceptibly increased by such means, the bees would instinctively increase the size of the cells for brood. This belief is confirmed by the fact that a race of bees has been discovered in India of which race the workers are as large as the drones of our ordinary races, and it is found that these bees build comb with very large worker cells, corresponding with the size of the worker bees. My point is that these bees are not large because they were raised in large cells, but that the cells are large because the bees which built them are large.

Now that this new race of bees has been discovered it will hardly be necessary to go through a long process of selection to produce a large race in order to find out whether the large bees are more or less profitable than the ordinary bees. It may prove that a colony consisting of a large number of small bees will do more work than one with a smaller number of large bees. Perhaps the great activity of a small race like the Punics, will more than offset the ability of the larger bees to gather honey from red clover. I do not think that it follows necessarily that large bees must be less active than small ones. Dr. Miller in criticising Mr. Smith's suggestion, asks: "Does the bumble bee get around more lively than the hive bee?" This is hardly a conclusive argument for it is very evident from the form of the bumble bee that it is not built for speed. With all animals, speed is not governed by size alone. The Percheron horse is certainly less fleet than the thoroughbred but on the other hand, so is the Shetland pony. In the case of the bees it is possible that by crossing the large and small races, a new race may be produced which shall combine the desirable points of both.

The United States Department of Agriculture proposes to import some of the giant bees from India and to do-

mesticate them if possible in some of our southern forests. As the drones of the new race are not much larger than the drones of our common varieties, it is hoped that there will be no difficulty in crossing the races As you mention in the APICULTURIST for this month (January), Mr. Frank Benton is to go to India as the Government agent to investigate the merits of the race called *Apis dorsata*, which I presume is the same that I have mentioned. Among the natives of India these bees are reputed to have a very fierce disposition. It is said that the bees sometimes attack the people in the villages and in some cases with fatal results. It may be that these reports are exaggerated, but at any rate it is certain that the natives in some way succeed in securing enormous quantities of comb and many tons of wax are annually exported. The bees are said to build combs "as large as an ordinary door" according to one writer. These combs are built on the branches of trees in the forests and some of the natives of the country make a business of collecting the wax for market. In climbing the trees these natives wear no clothing but they drive the bees away from the combs and at the same time protect themselves from attack by holding under the combs a bunch of burning leaves fastened to the end of a stick. By this means the bees are driven away and hover in the air over the comb and the comb is quickly cut out and lowered to the ground by a rope.

All beekeepers will wait with interest to hear the report which Mr. Benton brings concerning these bees, as nothing is now known except from hearsay reports. and we regret that we must wait until after the World's fair in 1893, before he can start for India.

J. EDWARD GILES.

New York, N. Y.

C. C. Eddy, under date of Jan. 15, writes: "I have taken all the bee-papers and find the API always gives me reliable information."

A FABLE OF THE WISE (?) MAN AND HIS BEES.

The wise (?) man informs the public that this has been an "off year," politically and otherwise, and that he must confess that when he was on the point of exclaiming "Eureka," he found that *his* method that was a success last year was of no avail this season.

He thought he could regulate swarming by giving *his* bees plenty of room and sections partly filled with honey, but they just swarmed and swarmed and continued to swarm till he became disgusted and left them to their fate. A handful or two late in the season would leave empty hives and fly aimlessly away. Many swarms were picked up on the prairie in different localities in the county; as to where they were going or where they came from, no one ventured an opinion. What caused them to act so rashly, Dr. Miller?

If he were to ask the 300,000 purported beekeepers in this country the cause therefor, he would no doubt receive 300,000 solutions to his query. In this connection he would say that he considers Dr. Miller the best authority in the world on all mooted questions pertaining to apiculture. His laconic "I do not know" will go thundering down the ages and all along the line of the 300,000 (more or less) beekeepers. and make him famous, whether he will or not.

Who can truthfully say "I do know for a certainty all about bees?"

What we *think* we know about them to-day, may be upset to-morrow for so often the peculiar actions of the busy little rustlers for humanity are past finding out. Still there is a fascination in and around an apiary, in spite of the frequent failures that we cannot prevent and are in no manner responsible for.

He is inclined to try his luck another year, and still as anxious to learn or be taught something about bees and their idiosyncrasies as when he bought his

first swarm or colony, whichever is right according to modern *beeology*.

He hopes the time will speedily come when he can say in all truth and sincerity, "an honest bee is the noblest work of its Creator, or introducer, whether it, she or he has five bands, none at all and is as black as Erebus.

His bees are not honest *now;* they broke their former record, and have adopted a "go as you please" gait. He gave them credit for being the best-behaved bees in the world, and the best workers withal, for hadn't he paid many hard-earned dollars for queens with pedigrees and many *yellow bands*, their progeny being warranted not to sting, provided they were not crossed with hornets and in the very laudable and lawful efforts to hoard honey they had no use for; in that respect being likened to a Gould or Vanderbilt (because they were built that way)? and did not they water their honey even as railroad magnates water their stock? and didn't they bring in stuff (sometimes called "bug juice") and store it in cells prepared for the sweetest nectar, which will cause their bowels to extend and their eyes to distend this winter, stuff they cannot possibly digest in their inert condition (so say the learned ones)?

Second. They (the bees) became thoroughly imbued with the "independent principle "discussed on the farms, in the cities, towns, hovels and palaces in Nebraska."

Why should they be required to wear out their wings and precious lives toiling for bloated bond holders, so long as the national banks could borrow money of the government at two per cent, and the best comb honey would not bring but 15 cents per pound in the market which the universal law of supply and demand did not regulate?

Third. They called conventions, held daily meetings on clover heads (dripping with honey they refused to gather) in fair weather, and under pumpkin vines during the rainy season adopted resolutions, condemned in scathing and unmeasured terms the powers that be that sought by providing them luxurious apartments, furnished with all the modern improvements, to induce them to lay up large stores of honey to enrich their owners.

Seditious commotions were of hourly occurrence. Flattering overtures were made to the old parties — the hornets and bumble bees — to join their ranks and aid in crushing and stamping out the gigantic honey monopoly.

Anarchical sentiments obtained a firm foothold in the colonies, and the adherents of that pernicious doctrine looked with disfavor upon their wealthy neighbors who had by untiring industry accumulated a surplus of golden stores. They stoutly maintained that the world owed all a living (dudish drones included) whether they labored for it or not, and that it was against public policy and the fundamental principles of their order to allow some to accumulate more than they could consume, while millions had not a drop of honey to eat.

Fourth. On or about the 5th day of September, and for a long time thereafter, incited and spurred on by the anarchical bees aforesaid, they in great numbers attacked their wealthy neighbors and robbed them of all their stores, and had not the strong arm of their keeper protected by rubber gloves and a bee veil over his face come to their rescue with fire, smoke and wet grass, the most destructive warfare ever recorded in the history of the Italian race would have occurred and none left to tell the tale.

And afterwards, to-wit on the 4th day of November, 1891, after the smoke of the battle had lifted and defeat had restored their perturbed spirits to their normal condition, they sought to ascribe their defeat to the fact that the hornets and bumble bees refused to combine with them, but continued to labor to provide for their own necessities and the public weal, never losing sight of the glorious mottoes inscribed on their temples, their homes, Pro bono publico, and "The voice of the people is the voice of our God."

Through the entire season they acted just like people, and seemingly considered themselves as such, and the wise man said Amen.

A. C. TYREL.

Madison, Nebraska, Dec. 9, 1891.

NEBRASKA WEATHER.

While you, in the east, have been enjoying such fine weather during November and December we here in Nebraska have been having a little variation in our usual programme. The weather here is generally fine during November and December often being quite warm till Christmas. This year cold weather began Nov. 1st, and since that time till the present, Jan. 6th, there have been but three days warm enough so that the bees would leave their hives for a flight. Dec. 13th and 14th they were out and again Dec. 31st. We have had but little snow, and no very severe cold weather yet; just cold enough so the bees have kept quiet.

I looked all my hives over Dec. 13th to see how they were doing and found the bees in splendid condition after their six weeks' sleep.

One of the hives containing swarms in extra good condition was the one presided over by an Alley queen (the one received June 10, 1891). They are very quiet and up to the present time there have been no dead bees removed from the hives.

Several of us were talking about the weather the other day when some one said "It is going to storm."

Another, a beekeeper whose bees are being wintered inside, said "I think not, the bees are quiet."

"What in the world has *that* to do with it," was asked?

Did you never notice in summer how active bees are before a storm? "Well, if you have bees inside and watch them closely, you will hear a commotion in the hive before a storm," was the answer. Sure enough it didn't storm. Can any one else give any testimony on this subject?

Dr. Miller in *Gleanings* wants to know "when beekeepers become *old beginners*."

I suppose all beekeepers were some time new beginners, but with some of them it was so far back in the dim and dreamy past, that the exact time when they ceased to be new beginners would be a hard matter for even themselves to answer.

And their wisdom being so great it is a matter of doub to others, whether there ever was a time or not when they did not know it all.

Then there is another class who are always looking for something new, even though they may be beekeepers of many years experience. They are not too old to begin something new if it be practical.

If we are not new beginners to which class of old beginners shall we belong?"

MRS. A. L. HALLENBECK

Millard, Nebraska.

FULL SHEETS OF FOUNDATION.

I wish to give my experience with full sheets of foundation as I see by the API that your experience is almost the reverse of mine (see page 163, API). I am satisfied that it pays me to use full sheets of foundation in my hives if the cost were double the present price of foundation. I have combs that were built out on wired frames ten years ago, and they are just as good now as any natural combs and the bees use them for brood from bottom bar to top bar. I also have some combs that were not wired that are good.

If I did not use foundation for natural swarms they would build from one to four frames full of drone comb, and when two swarms would be hived, one on full sheets of foundation the other on starters, the one with foundation would fill its hive and be ready for the sections before the other would be half full, and very often they would not get their hive filled with comb until the next

spring, and then they would fill it out with drone comb.

I have transferred several hundred colonies out of box-hives and they would have from one-third to one-eighth drone comb.

I have also looked over frame hives for my neighbors, and they were in the same condition as to the amount of drone comb. I think if Mr. Z. T. Hawk was to try to get along in this climate without full sheets of foundation he would come to the same conclusion as I have.

I have several times thought that there was some difference in the honey in sections filled with foundation and those having only starters. I would sample it and think no one could tell the difference in the honey or the comb. The crate with the full-sized starters would be filled much more quickly than the one with starters only. Now I do not wish to say that it would pay to use full sheets of foundation in any climate, but I think such articles as the one on page 1 of the API for Jan., 1892, are misleading to the majority of beekeepers, but when properly fastened and the frames are properly wired, there surely never was any more perfect combs than those built out on wired foundation, and after they are built out no one can tell that there is any wire in the comb except at the edge of the frames.

I think it would pay those who have but few colonies of bees better to use foundation in the brood-chamber than those who make beekeeping their business.

I have tried to cut out drone comb from my hives and get the bees to build worker comb in its place; but they would not do it and for cutting out drone comb and splicing in worker comb it surely is more trouble and bother to me than to wire and fill the frames with foundation, and the loss of time to the bees and to myself would pay for the entire expense.

Bees have not done very much in this locality for two years, and have wintered poorly on account of spring dwindling. I went into winter quarters with eighty-six colonies in good shape. This has been the wettest winter in Oregon since I came here in 1879; but it has been very warm — have had but five or six frosty mornings.

Needy, Oregon. D. KAUFFMAN.

HOUSE APIARIES.

No 1.

FRIEND ALLEY:—I hardly know what to think of your house-apiary, or more correctly, "Springing" house. Ordinarily I do not think it would pay the usual beekeeper to manage all the bees, which are to be run for honey, in such kinds of houses. It is very good for the queen breeder I have not the least doubt, but for the honey producer to take so much trouble is different. There might not be much honey for the bees to gather after they were reared. It costs considerable in feed and the time of the apiarist to rear bees. I should think it would require from 20 to 35 pounds of feed to build up colonies for honey to a paying extent. For queen-rearing it may not take more than 5 to 10 pounds of food to carry a hundred queen cells over any length of inclement weather we may have in the spring. These cells would amount to a good many dollars worth of choice queens, where the colony so cared for would do better than I would expect to gather 50 pounds more than colonies kept in the usual way. I don't think bees reared so or at that season are as hardy as when subject to the natural conditions out of doors.

With me, colonies which are packed in large hives with side walls 10 inches thick do not come up to the honey harvest in advance of unpacked ones. They do better in the early spring, but later they do not gain so rapidly. I have tried carrying colonies into a sawdust packed room much like your house apiary, and then carried them out again when the weather changed, and there was not a paying difference except in very weak colonies, or colonies which had had their brood much spread.

Another time I built a box or hive 30 feet long to hold 15 colonies, and wide enough to pack around them with sawdust. Then a four-inch pipe was run under the brood nests and one end ran into a cellar where the temperature was kept at about 90 to 100 degrees. At the outward end of the pipe was the only escape of the hot air from the cellar.

This warm air was admitted into the brood-chambers through a number of small holes made in the bottom-board. This plan gave the best satisfaction of any I know of for honey-gathering colonies, but this would not pay for the trouble in dollars and cents. I used this warm air and gave warm stimulative food each day. It was a great deal of satisfaction to build the colonies up in this artificial way so early.

I expect to try the experiment again in a year or two, and on a more extensive scale.

Clinton, Wis. C. W. DAYTON.

I do not expect to have to feed the colonies in my bechouse to the extent Bro. Dayton thinks necessary. Those that have plenty of stores will not be fed any. I do not think it necessary to carry the temperature up to 90°. It will not be allowed to drop below 50° at night.—ED.]

HOUSE APIARIES.

No. II.

The December issue of API presents a number of new ideas upon the subject of house apiaries. The editor has evidently been studying upon a plan for a house-apiary for some time, and it now seems to me probable that the placing of an open end wire cloth box between the hive and side of building through which the bees must pass, to reach the outer entrance, may make all the difference between success and failure with an artificially heated bee-house as proposed. For summer use I think that there should be at least two one-inch auger holes for an outer entrance, but one of them would be large enough for the winter and spring. The stopping of auger holes in the manner suggested I have tried for several years and I find the corks both cheap and entirely satisfactory. On very cold days in winter and spring the outer entrances could be stopped and the temperature raised to 70 degrees and the bees be made most comfortable. The wire cloth box in front would give them a chance to come out and wash their faces and return to the hive contented. On suitable days for the bees to fly out the corks can be removed to be replaced at evening. The wire cloth box could be made as wide as the hive and three to six inches high and four to six inches long, which would give ample room for the bees to come out and get the fresh air. The box could also be arranged so as to be easily removed for cleansing when necessary.

I am much interested in these experiments and can see nothing in the way of the practical utility of such bee houses except the first cost and the subsequent cost of fuel and labor necessary to the proper care of the bees.

These measures are expected to give the bees a great start on fruit blooms and then again upon the locust, tulip tree and wild cherry bloom which have been the only sources of surplus in this locality for the last three years. These rarely fail of a crop if we have the bees to gather it. Two out of the three years the white clover bloomed profusely but furnished no nectar; the failure of nectar secretion being due in my opinion to heavy frosts in May that also damaged all kinds of fruit.

With the best management heretofore adopted we have been able to get only a part of our colonies in condition as to numbers of the bees to take advantage of the sources of nectar named. If the artificially heated house apiary will give us the bees at a cost not to exceed the worth of the surplus that may be had from the early bloom, then it may pay all beekeepers to construct cheap bee houses and resort to an entirely different system of winter and spring management than heretofore adopted.

One thing is certain, we must look for something else than white clover that succeeds here in giving us a crop only one year out of four, or beekeeping will be abandoned for more profitable business.

New Phila., O. DR. G. L. TINKER.

KEEPING BEES IN CONNECTION WITH OTHER BUSINESS.

We have now entered the portals of a new year and are, many of us, reflecting upon the possibilities and prospects of the beekeepers of 1892. There are some whose success seems almost assured but many who realize that they may as surely fail. There are many who have added to the business of keeping bees a supply trade, from which a revenue to some extent may be expected; others who make a specialty of raising queens, or offering a needful implement they have invented, which brings up the cash at least to a living basis.

But we know that all can not be inventors, supply dealers or queen breeders; that there are those whose adaptability and circumstances forbid a branching out into these lines, hence a more careful study of the production of honey. Still, the low price of the latter, and the results of poor crops considered, it is plain that some other business must go hand in hand, to ensure a livelihood, and what shall it be, that can successfully claim our attention and interest, alongside the apiary? "Small fruit, Poultry, Blacksmithing, Country Store, Hotel, etc.," are recommended.

Any business must have a head to it. We must enjoy it, and it must claim our attention at the right time, or else disaster follows. With small fruit, this comes at the same time when we are busy with the bees. Blacksmithing, if enough of it, would leave no time for bee work. If only a small business some one would be sure to want work in a hurry no doubt, just when we were, oh! so busy, in the bee yard, and perhaps one or more swarms on the wing that must be attended to at once, unless we had the self-hivers; and here is a point in their favor surely. It would not be advisable to lock up a country store, while the bees kept us on the run all day long. In the hotel, an institution kept going to accommodate the public, unless the force were strong enough to spare one to look after the bees, I do not know how it could be managed, for meals must be served when ordered, regardless of the bee business. A fruit that can be harvested in the fall might be raised, it seems to me, and not interfere. Still it requires time to bring these into bearing, especially apples, and a living must be had in the mean time, so I conclude that the beekeeper must consider what suits his locality, his own likings and conditions, also conveniences. But if it should be decided to try Poultry let me say, *Don't* try raising ducks if they are to have the range of the bee yard, as we found to our sorrow that a drove of Pekin ducks, almost depopulated our hives, until we were certain about it, and removed them to another yard. But chickens can be raised nicely along with bees. One year I started my incubator early, before there was any bee work pushing, and succeeded in raising from these hatchings over seven hundred fine fowls. These were fed and looked after without detriment to the bee work, and were quite a source of revenue—after expense was deducted—having a large pasture for them. Only once did the bees attack them in a vicious manner.

MRS. MILTON CONE.

Kansas City, Mo.

Those who purchase some of the so-called "swarm hivers" should bear in mind that such devices are an infringement on the only practical and patented automatic swarmer now in use. A word to the wise, etc.

MRS. AXTELL HAS A WORD TO SAY TO G. W. DEMAREE.

I like to read Brother Demaree's articles on bee culture because he writes like a man of broad experience and good sense.

I am sure he would not intentionally gave a wrong light to another's expressions in the API; but if he will turn to my article in the January number of the API, page 20, near the middle of the article (I suppose he refers to that article) and read it again, he will see that he did not quote my words verbatim on feeding bees, when he makes me say "feed sugar and don't care who knows it." He will see that I said instead, "if we do what is right and feed no sugar that will ever get into the sections, we need not trouble ourselves what others say. The last part of that sentence does not sound as if "we meant don't care who knows it." But years ago it used to trouble us *very much* because we had to feed. We would let our bees run low for food, consequently but little and sometimes no brood would be found in the hives early in May, so that often we did not have colonies to get the white clover honey in June, and by the time many of the colonies got built up strong, ready for the sections, the spring honey harvest would be over. We set ourselves positive almost against sugar feeding.

We would go to the dealers in the little towns around and bring home the honey we had supplied them with to sell, to feed back to our bees, and all we could gather up at home even if it were nice section honey, rather than feed sugar, also work our hives through and through, equalizing the honey in the hives until all colonies would be out.

Sometimes we would get them through until they began to gather, and then again they would be clean out a month before the honey harvest. Two hundred and fifty colonies with more than one-half a pound per colony, and some colonies clean out. Now, Brother D., what would you do under such circumstances? Wouldn't you feed your bees? I don't believe there are any who read this but would feed if they knew the condition of their colonies. Our neighbors knew we fed under such circumstances, and I don't think we sell sugared honey. Even our commission merchant, to whom we ship our honey in Chicago has sent us sugar to feed out bees several times, and I don't think they have the least idea that any of it goes into sections.

We always stop feeding just as soon as bees can get a living.

When can one particle of the syrup get into the sections if feeding is stopped just as soon as the bees can get enough to live on from the flowers, if we feed only what is used up from day to day? Bees when fed regularly start and fill their hives full of brood, but if the supply of food is cut off before they could gather from the flowers, all old bee-keepers know what the result would be. I believe in feeding liberally, but not in such quantities as it would be stored in the sections. We do not extract much honey now. Bees do not store honey in sections until they have first filled their brood combs.

The spring of 1890 we fed three barrels of sorghum syrup that was very dark. That spring we got about 1,500 lbs. nice white clover honey. I do not think there was one section that showed any dark honey in it.

Roseville, Ill. MRS. L. C. AXTELL.

ONE-BANDED BEES.

The marked copy of the API for February has reached me. On page 27, you mention that I have asserted that I never saw a one-banded bee, and suggest that if I had imported queens and would test them, I should find plenty of workers that have but one yellow band.

For once you have made a mistake. I have been for some time importing queens directly from Italy, and testing them.

Very often the half of the queens in my apiary are imported queens; these

queens are not all from one breeder; during the past season, I had importations from three different dealers.

I will admit that the imported queens have not what we Americans would perhaps call yellow bands; their bands are for the most part a leather color; but I have never yet tested an imported queen whose workers did not all show three bands.

I have looked into this matter a little and, aided by a powerful glass, have examined the worst colonies of hybrids I could find, and I have never yet found a bee showing yellow on any one scale that did not show yellow on all three.

Some of these do not show very much, but my glass makes the scale on each bee as much as an inch wide, and while they might appear to the naked eye to have no yellow on them yet with the glass it is plainly visible.

Now I don't claim that there is no such thing in existence as one-banded bees. But what I do say is, that *I have never seen a bee with only one yellow band.*

I have found that the queens from Italy produce bees very uniform in markings. There is too much jumping at conclusions concerning the markings of bees, honey-gathering qualities of races, etc., by persons who have not given them sufficient attention, or worse still who have never seen, much less tested them.

I might mention some instances especially, that came to my notice recently, of some of these wild statements written for perhaps so much per column, but it might draw me into an argument which would be neither pleasant nor profitable. W. C. FRAZIER.

Atlantic, Iowa.

LETTER FROM OHIO.

I read the January number of the APICULTURIST you sent me, and it will bear comparison with the best bee-papers. Your request to beekeepers to write will no doubt bring articles of worth from those who have before contributed much to make the bee journal valuable; but there is another class from which we have a right to expect something; it is those who have enjoyed so much from the costly experiments and useful hints of others without the slightest offering in return.

Almost every beekeeper, though he may not be extensively engaged, has something in use, or has had experience, a knowledge of which would benefit others.

I do not infer that the editor alone can not give to his readers a good newsy paper: he can; he can supply every issue with good reading.

But to make a more progressive paper, and to bring us to a better knowledge of the management of beekeeping, we need a variety that the editor can not supply and it must come from the reports of success and failure in the different localities. I visited one of my neighbors last June who twelve years ago purchased thirteen stands of Italian bees, an extractor and other fixtures at a cost of seventy dollars. He told me he had sold three colonies, had used all the surplus honey at home, and had frequently taken some from the brood combs. He now has nine stands left. They are located in the orchard some distance from the house to keep them from disturbing the dog. The hives were set on the ground and have settled the depth of the bottom-board in the dirt. The orchard grass had grown above the hives so that the bees going out had to climb it to the top before they could fly, and when coming in would drop straight down and worry through the thick under grass to find the entrance.

In answer to the question, "Are you ever troubled with robbers?" he said "no; the few strangers that succeed in entering never find their way out again."

Everything in the apiary is in a corresponding condition, while his garden

and strawberry bed, from which he receives some benefit, shows diligent attention. Strawberries won't thrive without care.

Another farmer in the same locality with 140 acres of land and a large flock of thoroughbred sheep to claim his attention, sold six hundred dollars worth of honey, the product of one season, from a small apiary.

He is thorough in his work and knows the value of good queens and will have no others.

Bees in this locality made small increase, producing very little honey the past season and, in many instances, have gone into winter quarters to starve before they can help themselves, when the same old cry, of "froze to death and I don't know why *I* have such luck," will be heard.

Luck has no influence for good or bad results, it is management; give the bees the attention you would other things around you from which you expect a profit, and you can rely on them for returns as you can the horse for his labor, and the sheep for wool when they have had resonable care.

W. Richfield, Ohio. J. S. S.

GIANT BEES OF INDIA.

(*Continued from page 31*)

The warm sun of approaching summer awakens her and she crawls out. Immediately she looks about her for a nest suitable to breed in. Having settled upon quarters, she begins collecting pollen from the flowers, storing it away in two pockets which she carries on her hind legs. Into the nest chosen, she puts the pollen and goes for more, fetching load after load until she has formed a ball of pollen perhaps as much as an inch in diameter.

In the ball of pollen she lays her eggs, and after a few days they are hatched, bringing forth little warm-like larvæ. The larvæ hatched in the mass of pollen feed upon the nutritious material, consuming the portions nearest at hand, until each one has cleared a little room. Then it proceeds to spin a cocoon around itself, and after a little while it comes out of this chrysalis a full-fledged worker bee. Almost immediately these new hedged bees begin gathering pollen, which they continually add to the original lump, making it bigger and bigger, while the queen goes on laying eggs in it as long as warm weather lasts. Perhaps before winter arrives the mass will have grown to the size of one's two fists. It is literally honeycombed with cells from which the young bees have made their escape, and these empty chambers are used for the storing of honey. Most of the honey gathered by bumble-bees is obtained from red clover. Up to nearly the end of the summer the queen lays only workers' eggs—that is to say eggs which produce females that are undeveloped sexually. They are the honey-gathering and comb building class. When autumn is coming on, however, she produces males called drones. At the same period also she lays eggs which give birth to full developed females, all of which are destined to be

QUEENS THE FOLLOWING YEAR.

These females mate with drones and thus are rendered able to reproduce their species in the next season. From six to twelve or the future queens are turned out by each hive. When cold weather arrives they crawl into snug places, where they hibernate during the winter, gathering pollen in the spring and laying their eggs in it. Thus is completed the cycle of their species. Only the queen survives, all the workers and drones dying. Thus it may be said that every bumble-bee hive is wiped out each autumn. Here is one of the reasons why this genus of Apidæ is not useful to mankind. They do not gather in numbers sufficient to accumulate large stores of honey, notwithstanding their industry. Ordinarily a single colony will not number more than thirty or forty individuals. Another cause for their worthlessness is that their cells, being formed in the manner described, are huddled together without order, so that the honey cannot

well be obtained from the combs in a clear state." The bumble bee and the honey-making bee proper are cousins. Scientifically speaking, they are families belonging to the same order. Four species of honey bees are known. Three of them are indigenous to India, and are found nowhere save in that part of the world. The fourth, known as "Mellifica," is distributed all over the globe. It includes a number of varieties, all of which were very likely derived from one stock at the beginning. Bees, like rats,

HAVE SPREAD WITH MAN,

though from a different cause. They have accompanied the human race as servants, not as scavengers. There were no bees in America until the seventeenth century, when the common black variety was brought over from Germany. It is that kind which swarms all over the United States to-day. But within recent years beekeeping has been reduced to scientific principles, and so it has been sought to procure from abroad finer breeds. Important among these is the Italian, which was brought to this country first in 1859. Italian bees have many advantages from the industrial point of view. They are docile and easily handled; they are very prolific, and they protect their hives better than the black ones do from the ravages of the wax moths. These moths lay their eggs in the combs, and the larvæ feed upon the wax and pollen, destroying the cells. In 1881 Mr. Benton, a well-known expert, went abroad, and brought hither other choice breeds from Cyprus, Syria and Palestine. These, particularly the Cyprian, are very handsome. Nowadays beekeepers select their stock as carefully as farmers do cattle.

On July 25, 1891, Joseph Place of Fillmore, Ohio, wrote thus: "The queen you sent me is doing wonderfully well. She beats anything I ever saw before. I have reared three nice queens from her, almost exact duplicates of their mother. I value her very highly. $15 would not buy her."

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EDITORIAL NOTES.

Ivar S. Young.

Many of the readers of the API will remember the visit of this distinguished Norwegian apiarist to this country several years ago in the employ of the government of Norway to investigate our method of bee culture.

Mr. Young, though quite a young man, died on Dec. 10, 1891. Had he lived till Apr., 1892, he would have been 55 years old.

Mr. Young had never been in this country before, yet he could speak the English language fluently and used all our common phrases and words in a very familiar manner. I remarked to him that he was wonderfully familiar with the English language, but he thought otherwise.

The Bay State was the first apiary visited by Mr. Young after landing on our shores. After spending one day and night here, he started on a trip westward, visiting all the prominent American beekeepers.

Mr. Young was considered one of the best practical apiarists in Norway, and for that reason was chosen to edit the only publication in that country devoted to bee culture. We regretted that his stay here was so brief, as he seemed to us very kind-hearted and a gentleman in every respect.

Ivar S. Young was the son of a farmer who died when Ivar was six months old. He not having much taste for farming, went to Christiana to take a High School course. After graduating, having a taste for business, he went to Scotland to acquire some knowledge of the same. After a year and a half he returned, and established himself in business in Christiana. Mr. Young leaves a widow, four sons and two daughters.

Most all the supply dealers advise beekeepers to order their supplies early. The API advises all to order when they please and have the cash to send with the order.

Some of those who have sent articles to the API do not understand the im-

portance of writing on but one side of the paper. Please write on one side of the sheet only and not too closely. Write a plain, bold hand.

The old question of "clipping queens' wings" has been run through the question department of *Am. Bee Journal* again and with the same old result. If anybody asked the question they must be more than ever in the dark on that point.

What a lovely feeling exists among those western bee-papers! It reminds one of very little children. When not quarrelling they are hugging and kissing each other. What does this sudden outburst of child-like affection all mean? There must be a cat in the meal.

The winter has been a favorable one to bees. On the other hand, it has been a most unfavorable one for the supply dealer. No one is complaining of a dull season, yet the fact that the present year is a very dull one cannot be denied. The crush will come by and by.

Beekeepers should not forget that more bees are lost in the snow at this time in the winter than during the months of January and February. Shade, or in some way darken the entrance to all hives on the summer stands. During the middle of the day when the sun strikes the front of the hive many bees will venture out and never return. They get chilled and drop on the snow.

The only report of the Albany convention that has created or excited the beekeeping public was the one published in the January issue of the Api. When other bee papers desire a truthful and interesting report of the doings of any bee convention Brother Pratt is the man to furnish it. When Brother Pratt started for Albany he was informed that the usual reports given of bee conventions were not desired. A report of how he found things written up in an interesting style would be just the thing, and was sent in. Leave the dry matter and subjects to the other bee-papers.

If anyone desires to know where to find beekeepers who are thirty years behind the times, just read that 15-cent bee-paper and note the puffing the worn-out old black bees are getting. The only real life black bees possess was infused into their blood by coming in contact with some of the yellow races that this pink-colored publication is berating.

La Grippe seems to have had its day. Even Bro. Newman is not complaining. La Grippe had quite a run in and about Wenham. Two deaths only in town. Although there are eight members in our family no sickness has occurred the present winter. In fact no physician has been called in for more than two years. Even our two grandchildren, whom "Rambler" styled as "twins" manage to eat about a dozen "square meals" per day. All children do that, I believe, when they can get the square meal.

By the way, speaking of our babies reminds me that Mrs. L. C. Axtell suggests this: "Why not tell us of your home and surroundings and family. Sometimes I think it is real pleasant to hear of beekeepers' families. It is like having a little pie and cake to eat. We don't want all bread and meat."

A very good suggestion. It will be adopted by the Api and Mrs. A. has been invited to set the ball rolling.

BAY STATE APIARY PRICE-LIST.

My price-list will not appear in the Api this year. Those who need goods such as I have usually sold will have my catalogue mailed them on applying for it. It contains eight pages and is fully illustrated.

While the experienced beekeeper has no trouble to feed a colony of bees at any season of the year, the novice is always uncertain as to the best methods to adopt. The inexperienced should be governed by conditions and circumstances. Last winter sugar and honey compounded as for shipping queens by mail

was used in the Bay State apiary and was placed on the frames with paper between to prevent the food from working down through the combs. This did not have the desired effect, however. The sugar gathered so much moisture from the bees that it softened and ran to the bottom-board. This is an easy thing to obviate. In case any colony must be fed this spring, the food will be placed on a brood comb and a passageway to the food made in the centre of the comb. The whole will then be covered with quilt and cushion and care used that the bees cannot get out under the edges of the cushion and perish.

If plenty of capped honey in brood combs is at hand, one or more such combs may be placed in the brood nest of the starving colony. This of course must be done on a warm day.

If I did not think house-apiaries were practical and of immense advantage to even the small beekeeper, I would not take the space here to say one word about them. As has been stated in these columns, I have a bee-house constructed on a practical and convenient plan. Thirty-two of my colonies representing golden Carniolans, Italians, Black and Punic bees were placed in the house in November last. Up to date all are wintering well.

The same can be said of the colonies in double-wall hives on the summer stand. The winter has been an unusually favorable one for bees. Perhaps a month from now I may be obliged to make an unfavorable report.

Let that be as it may, I can say thus far, the house-apiary has met my expectations. I usually find the temperature each cold morning 15° warmer in the bee-house than it is outside. This of course must be considered a strong point in favor of the house for wintering bees.

Our bee-house was not designed for the special purpose of wintering bees. That is, I did not intend to keep the temperature above the freezing point, as I am among those beekeepers who do not believe in wintering bees in the cellar where the temperature does not go down to at least 20° above zero when it is equally as cold in the open air.

The temperature in my bee-house has been down to 15° several times the past two months.

I will state some of the advantages I expect to derive from my bee-house experiments. I feel sure the colonies will all winter in better condition than most of those on the summer stands.

The main disadvantage of wintering on the summer stand is the cold spells that are sure to follow all warm waves in the spring. Well, now all experienced beekeepers know the result and effects on the brood in any colony of bees after a cold snap in the spring. As inexperienced beekeepers do not know about this matter, I will state it for their special benefit. During the warm spells in the early spring the queen lays eggs outside of the space the colony can protect from the cold. By and by a norther sets in and all the brood that has been started outside the cluster the bees occupied before the warm wave appeared is destroyed, as the bees had to cluster in a smaller space than even before the warm spell, in order to protect the brood they had previously. Well, now, there was so much loss of time in brood and labor. I propose to obviate this loss of time by heating the bee-house on cool days and nights. Some one will say that that will be a good deal of trouble and more or less expense. I have found that it requires but a small amount of fuel to keep the temperature of my house-apiary at fifty or more degrees. A small kerosene stove will do it nicely. In this connection there is another point to be considered. Suppose by heating the bee-house the colonies can be bred up to such strength that they will be strong enough to work in the sections during the first flow of honey? In many locations this is the best forage the bees get the entire season. I have seen the apple trees white

with blossoms but the colonies so weak in numbers that it was nearly all lost to them; whereas had the hives been full of bees as they were two weeks later, a fair crop of honey would have been secured. What old beekeeper has not experienced many cold and backward springs? The bees are kept back in breeding, in fact they lose every day in early spring by natural death of the bees. Suddenly the weather changes, the trees blossom and before they have gathered from the early blossoms and flowers, the first harvest is over, and before another flow the colonies have to be fed to prevent starvation. All this happens simply because the colonies were weak on account of the cold weather in the early spring.

I can see no reason why good colonies cannot be advanced quite one month by the method here suggested. At any rate, I expect to be able to tell all about it by May first.

Sometime ago I saw in one of the bee publications that the objection one person had to house-apiaries was owing to the fact that the colonies placed on the north side of the house dwindled in the spring and were thereby rendered worthless on that account. House-apiaries are no new thing, I can assure the readers of the API. More than forty years ago such houses were used in the town of Peabody, Mass., by a Mr. Perley King.

Mr. P. had several such houses in use. The bees were placed on the south and north sides. Of course the subject of placing all the hives to the south was talked over. Mr. King stated that the bees on the north side of the house cast the first swarms. I know the statements of Mr. K. to be correct. I can say, too, that since my bees were placed in the house, those on the east side have flown as early and as freely as those on the west side, and, also are wintering equally as well. In the May issue I will tell my readers how our house-apiary comes out.

I THINK IT A 1.

H. ALLEY, ESQ.: I use your drone-and-queen trap and think it A 1.

Brockville, Ont., Can. W. M. OSBORNE.

EXTRACTS FROM PRIVATE LETTERS.

Brother De Witt, Sunny Side, Md., says in a letter just to hand: "I think the parties that have been slandering you and your bees had better keep quiet. I purchased queens of some of them last summer and they are worthless."

They *are* quiet, friend D., and all of them wish they had kept so.

Mr. J. E. Giles, New York city, says this of the Bay State bee-hive: "Most of my bees are now in Bay State hives and I expect to use that style of hive altogether, after this. I do not think that anyone who has once used the closed-end frames, such as are used in the Bay State hive, will ever go back to the hanging frames."

"API just received," says Mrs. A. L. Hallenbeck. "How could it help being good with such a list of contributors as those of the February number?"

I have been trying to think of something that would express my appreciation of it, but it is like a little boy with a mouthful of candy trying to talk, I can't.

D. R. Phillips, of Fulton, Mo., says he has received a sample copy of the API and that it is a sensible, practical Journal. Bees, he says, "went into winter quarters in very good condition. A few professional bee-killers will lose their bees on account of extracting too much of their stores."

BEES DID NOT DO WELL. (?)

Bees have not done well in this locality. I had a little over five thousand pounds from 250 colonies.

Oronoco, Minn. G. W. WIRT.

SATISFIED WITH THE DRONE TRAP.

MR. ALLEY: Enclosed find 75 cts. for the API.

We would not keep bees without your queen traps and so we tell our neighbors all the time. Think they will send to you for some in the spring.

Mt. Carroll, Ill. ANNIE HURLEY.

A WINTER REPORT OF THE PUNICS.

FRIEND ALLEY:—I received Punic queen from you Sept. 4, 1891, and introduced her successfully according to your method. I could not judge very well of the qualities of the Punic bees last fall, because the queen was received so late in the season, besides I kept her colony robbed of eggs for more than a month rearing queens; but with all that she built up very strong, and to my very great surprise, she did not stop laying in November as the Italians did but continued to lay to this date, January 24. On the 10th day of January I examined the combs and found that she had three Langstroth frames of sealed brood with young bees hatching, and on examining the hive again January 15, I found that she was laying eggs in drone cells, and to-day, Jan. 24, she has sealed drone brood, and the bees are working as other bees work in July and August. The only thing in bloom (except some lawn shrubbery) is the Eucalyptus, and red willow, the latter only furnishing pollen. My young Punic queens had sealed brood January 15. My Italians commenced laying January 20th; at least a few of them did, as I found a few eggs on that date. Will report later.

JOSIAH GREGG.

ABNORMAL BEES.[1]

Several cases of one-eyed bees are described. The single eye is crescent-shaped and situated centrally, high up on the epicranium. The bees are workers, and other wise normal, except the ocelli are absent.

Several white-eyed drones, all from a single queen, are described. The ocelli are also white.

Several so called hermaphrodites, some drones, and some workers, are described. The combinations of drone and worker characters are very varied. In one case, one entire side is drone and the other worker.

[1]This abstract of paper, taken from *Proc. Amer. Assoc. Adv. Sci.*, will be printed in *Gleanings*.

ENEMIES OF THE HONEY BEE.[1]

The various enemies of the honey bee in the United States, from mammals to the fungoid germs or bacilli are named and their mode of attack and effect are given. The enemies consist of mammals, birds, batrachians, several species of insects belonging to nearly all the orders, species of all orders of Arachnida, and species of Asclepia and two species of Bacilli.

Prof. A. J. COOK.

Agricultural College, Mich.

[1]The paper, of which this is an abstract, will be printed in *Am. B. J.*

The API has been informed that an irresponsible party by the name of Timpe, whose unfair dealings with the beekeepers of this country the past two years have made him so notorious, has taken it upon himself to give the American golden Carniolans a bad reputation. Well, he he or any other equally responsible parties have the full consent of the API to blow the Carniolans to their hearts' content. Pitch right in, gentlemen, and do your best to kill them out. The probable effect on our business no doubt will be the same as in the season of 1891. Very few orders were received for queens of this strain until certain parties began to cry "humbug" in all the bee-papers. At the end of the season by looking over our books, it was found that nearly 500 golden Carniolan queens had been mailed to beekeepers in all parts of the United States and Canada. If any one would like to verify this statement by an inspection of our books, they can do so at any time.

Now, Brother Timpe, if you would like the full address of 10,000 beekeepers to whom you will promise to mail your circular, the API will furnish them. Notice is hereby given, however, that if the said circular contains anything of a personal nature reflecting upon the writer of this, Timpe will be likely to hear from it as soon as possible. Continue to blow the Carniolan bees as all who know you know what your statements are worth.

The first the API heard of this scandalous circular was from a subscriber in New York. It was as follows: "Have you seen Timpe's circular? He goes for you and Pratt solid. Why does Timpe make such statements when he knows no one will believe one word he says? Timpe can hurt no one but Timpe by his false, unreasonable and absurd statements.

ADVERTISEMENTS.

I have prepared an illustrated circular which willbe mailed free to all who desire my Italian, golden Carniolan and Punic queens. Punic queens reared from imported mothers only. Prices of hives, smokers, drone-traps, automatic swarmers, foundation, and in fact of all necessary articles used in the apiary given in my list.—HENRY E. ALLEY, *Wenham, Mass.*

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two stories, including 9 frames and two section cases, nailed for $1.95.

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1892 Keystone Apiary 1892

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Tested, "	2.50,	" "	2 00
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Send for circular. No Supplies.

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WE ILL FURNISH YOU the coming season, No. 1 White Basswood, 4 1-4x4 1-4, one-piece V-Groove Sections, at $2 50 per 1,000; second quality, $1 50 per 1,000. White Basswood, 16 lb. Shipping Cases, in flat, $7 per 100. All our goods warranted. Special prices to dealers Our Sections are in use in nearly every State in the Union.

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THE AMERICAN APICULTURIST.

A Journal Devoted to Practical Beekeeping.

VOL. X. APRIL, 1892. No. 4.

DO THE BEES BUILD CELL-CUPS AROUND EGGS?

In the Api, May, 1891, friend Alley says that Mr. Vogel is wrong in his statement, that bees will not build a cell-cup around an egg. He says "bees, that swarm naturally, always build a cell-cup around an egg and in all cases rear queens from the egg."

To this I can't fully agree with the editor. It is true, that bees willing to swarm naturally always rear queens from the egg, but the first thing they do is to build small cell-cups and the queen lays eggs in them *afterwards*. I have more than once seen the queen laying eggs into these small cell-cups and every beekeeper can prove this by close observation. We can find such small cell-cups without an egg in colonies preparing to swarm, and a day or more afterwards we will find an egg deposited into the same cell.

By the way, I have to remark, that some beekeepers are of the opinion that these eggs are transferred by the bees into the cell-cup. This is a mistake, and I do not believe that bees ever transfer an egg into any cell.

Quite the same thing can be observed in colonies with laying workers. Such colonies sometimes build a great many cell-cups and the laying workers deposit eggs in them *afterwards*. I must say, I have never observed, that a cell-cup is built around an already-laid *egg*. I said in my article in May, 1891, that I am not sure about this, because it is quite a different thing to say I have observed this or that and consequently it is a fact; or to say, I have never seen this, consequently it is not. While the first conclusion is correct, the other one may be wrong.

Now the reader may say, by using Alley's method of rearing queens, we use eggs and the bees build cell-cups around them. But do not be too hasty in any conclusion. Alley recommends to use eggs just three days old and twenty-four hours afterwards we see the cell cups started. You see, these eggs are just at the age when they are hatching, and the question is now will the bees build cell-cups before the young larvæ are out of the shells? Or do they not? I examine such comb-strips very closely to find out the truth and never have seen a cell-cup started in this case except the young larvæ were out. If I have given eggs not old enough, say about two days old, the bees always removed them from the downward cell and I could not get a queen-cell. So it seems to me very probable, that Mr. Vogel is correct in saying that bees *never* build queen-cells over an egg. If friend Alley has observed anything different, it would be interesting to know it.

Suppose all this is correct, it would be wrong nevertheless to say, that using just three days' old eggs for queen-rearing had no advantage. If the food for queens and workers the first three days is in any way different, the queens reared by using eggs, will get the queen-food from the start, while if larvæ are used, say only twenty-four hours old or even younger, they have received some of the

food prepared for workers. My *opinion* is that the food for queens and worker-larvæ the first three days is chemically not different, and that is the reason I prefer to use larvæ about twenty-four or thirty-six hours old. Hereby I can get more cells started and I can use any comb and do not need to give an empty comb to the selected hive four days before I need the strips for queen-rearing.

L. STACHELHAUSEN.

We do not disagree as badly as you think, friend S. Bees will build cell-cups around eggs when the comb is prepared for cell-building according to the method given in my work "Thirty Years Among the Bees."

If eggs thus prepared are given queenless bees too soon after being deprived of a queen, many of them, but not all the eggs will be destroyed.—ED.

SOMETHING ABOUT MINNESOTA BEEKEEPERS.

There are twenty or thirty beekeepers in this part of Minnesota within the range of my acquaintance, and perhaps the readers of the API would like to know how they are getting along out here. Well, properly speaking, they are not all beekeepers, some let the bees keep themselves. They expect the bees to work for nothing and board themselves, and bring in their owners a large amount of surplus honey. Some use the old box-hives, and think they are just as good as any, they say they have kept bees for ten or fifteen years, and of course know all about them. You could not tell them anything, or persuade them to take a bee-journal, they say that is all theory and amounts to nothing. Others that try to learn something and give their bees proper attention realized last year from 100 to 150 lbs. of surplus honey per hive, spring count. Last year with us was a good year as long as the white clover 'asted, but after that failed the dry weather set in, and there was not forage enough for them to lay in a sufficient supply of winter stores, consequently those that were not fed will not winter very well.

I have used Alley's queen-and-drone traps in controlling swarming with very good success. I don't pretend to know much about bees myself, I have only been in the business about two years; and what I don't know would make a very large book. However, I am trying to learn as fast as I can. I read everything I can get hold of about bees, and ask everybody that I come in contact with that I think knows more than I do, all the questions I can think of. I have been taking the API, the last year; besides I have copies of all the bee journals published in the United States and Canada, also several of the best books that I could get hold of on bee culture. I will now tell you the different ways bees are wintered in this part of Minnesota. Some few leave their hives on their summer stands, without any protection whatever. Others winter their bees in cellars. One man places a box over each hive, about six inches larger each way than the hive is, and packs the space with chaff or fine cut straw.

But the most common way of wintering bees out here is to bury them; this process has been in vogue for the last ten or fifteen years with very good success, provided the bees have plenty of stores; and they winter this way with a very small amount.

And this is the way it is done. A ditch is dug in the ground about two and one-half feet deep and long enough to hold the hives, and wide enough to set the hives in crossways of the ditch. In the centre of the bottom of the ditch, a small trench is dug, the width and length of a spade, then a two by four scantling is laid on the shoulders, made by the small trench, the hives are set on these scantling with the bottoms off, which gives a free circulation of air under the combs.

Then at each end of the ditch are two ventilators made by nailing four fence boards together. The ventilators extend down to the bottom of the small

ditch, and four or five feet above top of the ground. About eight inches of the lower part of the inside boards of the ventilators are cut off, so that the foul air can escape. Wire netting is tacked on top of the ventilators to keep out mice. The ditch is then covered up by laying sticks and boards across, upon which straw is laid; then all is covered up with dirt, the same as you would cover up potatoes.

Then over the dirt is a thin covering of straw or manure, extending three or four feet around from the ditch to hold the frost, till the surface water in the spring runs off.

WHICH WAY SHOULD HIVES FACE?

It is the general belief, or at least the common practice, to have the entrance toward the south.

While there may be some reasons for this practice, I think any other point as good if not better. A southern entrance is more likely to entice the bees out in the spring, or late in the fall when the weather is too cool for bees to fly, and when it would be better that they remain in the hive.

In the heat of summer, too, a southern entrance is most undesirable. It is more difficult to shade that side when accommodation for flying bees is needed.

An eastern entrance is quite objectionable. It is the point toward the morning sun, and perhaps bees may see the light a little earlier in the morning during the honey season.

I have used a north front with a good deal of satisfaction. It is cool in summer. The hive is easily shaded. In summer the morning sun shines first on the north side of the hive. The entrance can be entirely closed on cool days in the spring, if the north wind blows. I prefer a north entrance to a south. — E. Secor, in *Farmer and Breeder*.

Write short articles for the Apiculturist.

COLORADO BEEKEEPERS' ASSOCIATION.

On January 18th and 19th, 1892, a large and enthusiastic gathering of the members of the Colorado Beekeepers' Association from all over the state assembled in the Chamber of Commerce in Denver for mutual conference and improvement.

Reports of successes and failures showed that last season was not a very profitable one in the production of honey, owing to excessive rain in some localities and dry weather in others. Beekeepers also have obtained 125 to 150 lbs. of marketable honey per colony spring count, in other years, reported only sixty to ninety lbs. for last summer, and many but twenty-five to forty. Harry Knight of Littleton, has been accustomed to have six to eight tons of honey to dispose of each season, but this winter has hardly half as much.

Some of the interesting questions discussed at this meeting were: How best to stamp out foul brood from an infected apiary. Is it more profitable to run an apiary for comb honey than for extracted? What is the best method of wintering bees in Colorado? how to prevent swarming; what is the cost per pound of producing honey? what is the best honey-producing plant in Colorado? is beekeeping a suitable occupation for ladies?

The answers to these questions were exceedingly varied caused in many instances by diverse conditions in different localities. The lady members affirmed that beekeeeing was an admirable occupation for the gentle sex. Alfalfa, a species of clover adapted to the arid regions, was a general favorite because of the abundance of the nectar it secretes, the delicious flavor of the honey gathered from it, and the attractive appearance of the well filled section boxes. The Rocky Mountain bee plant, (*Cleome integrifolia*) had numerous friends as a honey producer, and the *Salvia lanceolata*, a species of mountain sage, is known to afford excellent bee

pasturage in some of the mountainous portions of the state.

Along the rivers and streams where the alfalfa is abundant and the fields are irrigated the honey flow most seasons is wonderful. Mr. G. W. Swink, of Rocky Ford, reports that last summer he weighed a populous colony of bees every day during the height of the honey harvest, and found that it increased in weight one day eleven and one-half pounds. It would be interesting to know, if any fellow could find out, just how much in addition was consumed by the colony that day, workers, drones and young bees, so that we could get the exact amount gathered in a single day.

Foul brood is making sad havoc with the apiaries in some portions of the state, and energetic measures are being employed to stamp it out.

The future is full of promise for the beekeepers of Colorado, and this state is destined to rank among the foremost in the production of honey. The vast alfalfa fields under ditch so as to be irrigated from time to time during the season furnish a nearly continuous honey flow from June to October. Our cloudless skies during most of the summer are so continuous that the busy honey gatherers are interrupted scarcely an hour of daylight while the honey harvest lasts. The wild flowers too, some of them provided with stores of honey, have been waiting for ages to yield their delicious supplies of luscious sweets for the use of man.

Trinidad, Col. F. O. Blair.

EVIDENCE THAT DR. MILLER READS THE API.

The March Api has some good reading. J. Edward Giles makes a pretty good point on page 33 when he trots out his Shetland pony to prove that "speed is not governed by size alone." After all, friend Giles, are you not mistaken in saying my argument is hardly conclusive, for the only point I was trying to establish was the very one that you make, namely, that speed is not governed by size alone? You will remember that the argument had been advanced that increase in size would bring increase of speed.

But Mr. Editor, what makes you let A. C. Tyrrel hold up my ignorance to the public scorn, by asking me to tell why his bees swarmed in such an unusual manner? He knows very well that I don't know. Moreover I think he knows very well that I don't know why bees swarm in their usual manner. How I wish I did. Friend Tyrrel, when you tell me just why bees swarm usually, I'll try to tell you what made your bees cut up so.

I'm quite interested to know how you come out with your house apiary, friend Alley. I'm quite ready to hear that you made quite a gain by it, and on the other hand, it would not greatly surprise me if you should bluntly tell us in the May number that it did more harm than good. But give us all the particulars.

Marengo, Ill. C. C. Miller.

I am happy to say that the bee-house is working nicely in every respect. Wish you could see it Dr. I know you would go home and build one nearly like it. This very moment a northwest gale is blowing, the temperature several degrees below the freezing point outside, while inside it is up in the sixties and the bees perfectly quiet. This is owing to the fact that three days previous to to-day, the bees have been on the wing and working in flour. A steady fire is now being kept in the house and, Dr., you better believe there is solid comfort in working in that house, it is so much like summer.

The colonies placed in the house have wintered very well. They are strong just now. After the bees were put in no attempt was made to control the temperature. Most likely the May Api will tell a good deal about the Bay State house-apiary.—Ed.

SPECIAL NOTICE.

The readers of the Api should not forget that one queen of any race reared in the Bay State apirary will be mailed to any subscriber at a discount of twenty-five per cent from the regular prices found in our catalogue.

A FAMILIAR TALK ABOUT BEE CULTURE FOR THE BENEFIT OF BOTH NEW AND OLD BEEKEEPERS.

Bee culture is a subject that can be discussed without wearing out or growing old, and it does not in the least tire those engaged in keeping bees, even if much of the bee talk is a rehash of some of the old subjects. On this basis I propose to touch upon many old points and theories as connected with bee-keeping. First, a word about the different races of bees.

In the list comes the first race imported, that of the common, or German bee, which came across the ocean in the seventeenth century. This race was considered good until the introduction of the Italian bees. Well, the old races of black bees are not to be despised by any means. They have done us good service, but notwithstanding this, their utter extinction is not far in the future. Even now it is difficult to find a pure colony of black bees.

THE ITALIAN BEES

are getting the start, and are by most beekeepers considered much superior to the old German or black bees. The Italians have made a good record and one that recommends them to all who desire a first-class race of bees. The true Italian bee does not have *five* yellow bands. Three bands are all that can be claimed. When yellow bees show more than the last named number of bands, they are called "sports" and many consider that the excess of bands is a sure mark of deterioration in the health and gathering qualities of the bee. The darker strains are stronger, hardier and much better honey gatherers.

The three-banded leather-colored strain of Italian are the favorites with all large honey producers and the practical beekeeper. While the flashy advertisements of the five-banded Italians rope in many of the unsuspecting beekeepers, they soon learn from well paid experience that the all-yellow Italians are worthless, except for a bee to look at; old beekeepers have found it so.

The beginner and inexperienced should consult the experienced beekeeper on points that will prove of immense value to him. By the way, don't call on one of those old box-hive beekeepers for information who tell you that bee papers are a humbug and useless. Call on those who read *several* bee papers; these are the intelligent and successful beekeepers of the present time. Though the latter class may disagree as to which is the best hive, or which is the best strain of bees, yet such people are the ones who are posted on all important points of bee culture, and they are able to give the beginner some good sound advice, and will save him much time and money in the end.

A WORD ABOUT OTHER RACES OF BEES.

American beekeepers have tested the Cyprian, Syrian and some other new races of bees, and all have been found lacking in the desirable qualities. Now we are about to test another new race—the Punics. All I have to say here concerning these bees is let us test them, and if they do not come up to the other races on a majority of the desired qualities, then drop them. It will be time to cry them down when they have been tested and found wanting.

QUEENS, WHAT THEY SHOULD BE.

It may be claimed that one's success in beekeeping may be owing to the hive, the strain of bees, the method of wintering, the peculiar constructed brood frame in use, or, in fact, to a good many things best known to himself; yet, success in beekeeping must be credited largely to the vigor and ability of the queen to rear a large family of workers full of activity and a disposition to work from sunrise to sunset when the weather is favorable and there is plenty of nectar in the flowers. The inexperienced beekeeper does not know there is such a vast difference in the quality of queen bees. All queens are queens to be sure, that is, they are females and capable of laying eggs. But while one queen will lay 5,000 eggs in a day, there are others

that will not lay 500 eggs in several days. Then, again, the queen that will deposit 5,000 eggs in one day may be as worthless as the queen that produces less than 500 eggs a day. The bees of the prolific queen may be idlers and gather no honey, and the same may be the case with the bees of the queen that produces so few eggs in a day.

It makes all the difference in the profits whether the bees are honey gatherers or loafers. Few people keep bees to play with.

PRODUCING GOOD QUEENS.

How shall the beginner produce the most profitable queens? The beginner can do it, only in one way. The inexperienced beekeeper after a little experience can manage to save the queen cells that are left in his hives when a swarm comes off. Now this is a good deal of trouble to one who has not at hand the proper arrangements for caring for the cells, and rearing the young queens till they are fertilized. Of course the text-books must be consulted for information on this point. The small hives, combs and bees with which to form the nucleus must be provided. The details for making this operation successful are too long for the space we have to be given in this connection. In order to produce the best queens one must have some experience in queen-rearing. There is no sure way to know whether queens are valuable or otherwise except by testing them.

While many claim that queens reared under the swarming impulse are superior to those reared by what are called artificial methods, I feel obliged to disagree with that class. My experience in the queen-rearing business teaches me, though it may seem impossible, that better queens can be reared on the forced plan than are reared at swarming time. It should be borne in mind that all naturally reared queens are not perfect, nor are all those perfect reared by any of the artificial methods. Some advertise queens reared by natural methods all the season from May 1st to middle of October. Considering that the swarming season is less than two months duration, it is somewhat of a puzzle to the reliable queen breeders how the thing is done.

To go back to preserving the cells reared at swarming time, will say to the beginner that the only practical way for him to rear such queens, is to deprive the colonies he desires to requeen of their queens in three days after a swarm has issued. Two days later place one of the queen cells taken from the hive from which the swarm issued, in each hive made queenless. It will not be necessary to take out any combs to insert the cells. Just push one frame sidewise, place the cell in and let the comb come back to hold the cell in place, being careful that the comb bears on the base of the cell only. The young queen will come forth in a few days; five days later will be fertilized, and all will go well with that colony.

Someone will say "you do not give all the little details so that an inexperienced person can carry such operations to a success." Well, it is impossible to put in all the little points. The best way for one to do is to take hold and put the things described into practice.

THE DRONE BEE.

The drone or male bee has his part of the work of the colony to perform. He is on hand when his services are needed, which is when the young queen takes a flight when five days' old. Some few people have asserted that queens are fertilized when under five days old. In an experience of over thirty years in rearing queens, I have never known a queen to become fertile until they were from five to ten days old. In the course of thirty-six hours thereafter, the queen commences to lay.

The future prosperity of the colony depends as much upon the drone as upon the queen. The drone must be strong, vigorous and a very active specimen of his kind. The male bee transmits its good or bad qualities on the generation to come and it will be as marked

as that of the queen. It is well to make as good a selection of the drone as of the queen when rearing queens.

THE PROPER HIVE TO USE

This is a question that no one dares to decide for anyone but himself. If I cared to advise any one on the selection of a hive, I should say that a hive adapted to a frame about the Langstroth standard, whether it is a closed-end, plain L., or the Hoffman style, is all that one would need. A good colony of bees will live and thrive in almost any kind of a box, barrel, nail-cask, or, in fact, in a barn or in a meeting-house steeple; but the practical beekeeper wants something better. He wants a hive on which can be placed and directly over the brood-nest not less than 24 one-pound sections, and a hive on which the sections can be tiered to any practical extent. About 100 sections are as many as should be placed on any hive at one time.

If bees are to be wintered on the summer stand, the brood-nest should be protected by an outside case. This would not only help the bees to winter well, but it is of great value to the colony in the spring.

PACKING IN WINTER.

It has been decided by actual experiment that packing between the outer and inner hives is not necessary in winter. The main objection to doing so is the liability of the combs to mould from the dampness that is always present in hives that are packed. Packing over the combs is all right. Bees cannot be packed too warm in the spring. Pack the hives so that there will be no loss of heat. This will promote brood rearing and the bees will require less food to maintain the high temperature necessary to brood rearing.

WHEN TO UNPACK.

Unpack when it is time to put the sections on. There will be cold nights after that, and in order to keep the temperature of the brood-chamber as high as possible the entrance should be contracted each night to about one inch.

FOUNDATION IN SECTIONS.

It is actually necessary to put more or less foundation in the sections as starters, as the bees are slow to enter them unless there is something to induce them to do so. Then again, if the honey is to be put in the sections in the best form, a starter must be used. Many think it is an advantage to fill the section full with foundation. I find a piece one inch wide to run across the top of the section about all that is needed. If cut in V-shape it works all right.

Whatever foundation is used in the sections, it should be the thinnest made. Your customers will not be well pleased with your honey even if it is of the best quality, if that "fish-bone" is found in it.

BEST TIME TO REMOVE HONEY FROM THE HIVE.

To preserve its snowy whiteness honey should be removed from the hive as soon as it is all capped. In my opinion the quality is much improved the longer it is left on the hive; yet if it is not soon removed after being capped, the beauty of the comb cappings will be dark, and the price obtained for it will be much less if sold to the fancy dealer.

WHERE TO KEEP HONEY.

Dog-day weather is the worst time for comb honey. The air is so full of moisture and the honey so cold that dampness condenses on the cappings, and if all the cells are not sealed, the unsealed honey absorbs the moisture, sours, runs out and daubs the combs. If the honey does not run out when not handled, it is sure to run like water if the section is given a little cant. The best place to store comb honey is in a warm, dry place. If one has much honey stored, it will pay to keep a little fire in the room on such days as we call "muggy." Start the fire and ventilate the room. The heat will not hurt the honey but the moisture will. Few dealers want honey on hand until after dog-day weather is over and flies are gone. The honey room should be kept dark.

When honey is sent to market not more than sixteen sections should be placed in one crate. I need not say that the nicest honey should be put next the glass: that is where the buyer expects to find them.

SECTIONS AND SECTION CASES.

The one-pound one-piece sections are in general use. Two-and four-piece sections are a nuisance in any apiary. A smart boy can put up ten one-piece sections in the same time it requires to put up one four piece section. Then again, when the one-piece section is put up it stays in shape, even though they be thrown in a heap on the floor.

There are a good many styles of section cases in use. I like a section case so constructed that there is a bee space between the sections and the top of frames, and one so made that the bees cannot soil the sections when on the hive. I also like a case so constructed that the sections can be reversed at the proper time. This is quite an advantage, especially in a poor season, as I find the bees are more likely to fasten the combs on all sides when reversed. When so built in the sections the honey is in much better condition to ship a long distance.

GRADING HONEY.

This is one of the new subjects now under discussion. Well, pick the best first when crating, then it will be best all the time. It won't make much difference whether the crates are marked No. 1, or marked with a big G. The best quality will consist of the best graded honey, and no markings of any sort can change it.

This long discussion now going on in some of the bee-papers on "grading honey" is a waste of time and space. But, then, where a fellow is getting $2 per column for copy he must say something, even if it is of no consequence.

TRANSFERRING.

Some thirty years ago transferring was a question that hundreds of bee-keepers were interested in. Now all that has gone by. If the beginner has bees in box-hives, let them remain so, is my advice. Have some good movable frame hives made, and when a swarm issues put the bees in them. Of course bees in box-hives cannot be handled as those in frame hives. If a colony in a box-hive dies, then transfer the best of the brood combs to frames. Don't start with box-hives and then there will be no transferring to do.

RE-QUEENING.

Requeen the colonies when the reigning queen is old, or has proved worthless. Never disturb the queen in any colony that is doing good service, no matter what the strain or variety is.

INTRODUCING QUEENS.

I know of no method of introducing queens that is absolutely safe and sure that the beginner can follow. Certain methods are practised in the Bay State apiary, and generally with good success. One of the safest methods of introducing a queen is by the three days' method. That is to let a colony remain queenless three days; towards dark on the third day blow a little tobacco smoke in at the entrance among the bees and let the queen run in. The same thing may be done by letting the colony liberate a queen from a shipping cage when the bees have been queenless seventy-two hours.

It is pretty hard for Mr. Demaree to believe that old virgin queens can be introduced to full colonies by tobacco smoke; yet each season during the last thirty years I have introduced 1000 virgin queens. No other method for introducing queens is practised in the Bay State apiary. Have introduced by the smoke method upwards of one hundred queens in a day without the loss of even one queen.

It is really tiresome to read some of the methods of introducing queens that are practised by many of our prominent beemen. As their methods are as unsafe as any given, I cannot see why they make so much fuss over so simple a thing as introducing queens.

I cannot understand either why, or how, it is so many beekeepers have their queens destroyed when they introduce them. Just give the colony a good fumigating with tobacco and my word for it, not one queen in one hundred will be destroyed whether the hive has been queenless one or three days. The beginner in order to make a sure thing of it should use the three days' method.

One of the advantages of introducing queens towards night, and it is an important one, is that the bees are all in the hive. I don't like the idea of a lot of fresh bees entering the hive after a new queen has been given the colony.

HIVING SWARMS.

If the novice is ever excited it is when his bees swarm. Some of them run for tin-pans, or other old tin articles upon which they can beat and create a racket and seem to be doing their best to frighten and drive the bees away, instead of doing anything to make the swarm settle on some object. This tin pan business is all unnecessary. Give the bees time to look about, and they will soon find a place on which to lodge. When they have all done so, it is a good plan to sprinkle them with water (a small force pump is handiest to use in the apiary). This operation will prevent the swarm decamping while the ladder, hive and other things are being made ready to take the swarm.

Place the ladder in a safe and convenient place to the cluster, then with a large basket in hand ascend to the tree and place the basket directly under the cluster, give the limb a blow on the under side, or a sudden shake and nearly all the bees will drop into the basket. The hive may be placed directly on the ground and the contents of the basket turned down in front of the entrance. The bees will soon run in. Place the hive on the summer stand as soon as possible.

If two or more swarms should issue at the same time and all cluster in the same place proceed at once to divide them. Have some cages at hand and capture each queen when found. Give each swarm a queen. A little tobacco smoke blown among the bees will prevent any queens from being killed.

Don't be afraid to handle the bees. Turn them in a heap on a blanket, having the hives near by, and with a dipper proceed to divide them up in equal lots.

ARTIFICIAL INCREASE OR DIVIDING.

If your bees will not swarm and you desire to increase your apiary, artificial increase must be resorted to. This is done by dividing the combs and bees of a strong colony. Proceed thus: remove three or four frames of brood and honey to a new hive, leaving the queen in the home hive. Fill the space in both hives with other combs, frames having starters or sheets of foundation. Place the queenless portion of the colony on the old stand and remove the part having the queen to a new location some distance from the old stand. In the course of three days give the queenless colony a queen or a well-matured queen cell, say one that has been capped six days. Both colonies will in a short time be in a prosperous condition.

THE RIGHT NUMBER OF FRAMES TO A HIVE.

This is another of those questions that is not likely to be settled to the satisfaction of all beekeepers. The Api was the first bee-paper to advise the use of but eight frames in the brood-chamber of any colony of bees. Now nearly all successful beekeepers are using but eight frames. Those who use this number of frames for one season only will not return to ten frames again. The advantages of the smaller brood-chamber are so marked that it commends itself after a short experience to all who test it.

It seems to me that it ought not to require a long argument to convince any one who has had experience with bees the advantages the 8-frame hive possesses over those having 10 frames. Eight good brood combs free of drone

cells will furnish all the room the most prolific queen can utilize to advantage for her eggs. Hives should not be constructed to see how many combs a queen will use for brood, nor for the storage of honey in the brood chamber. Anyone should understand that the more room there is in a brood-chamber, the less number of bees will enter the sections. I believe in the crowding theory if it can be called a theory; but haven't we passed the *theory* stage and reached rock bottom on this point?

The more the bees are crowded in the brood-chamber the more likely they are to enter and work in the sections. In order to get the best results from a colony of bees, they should be obliged to go upwards for storage room. Sections placed at the sides, or under the brood-chamber are not practical. This has been demonstrated many times. It is as natural for bees to go upwards for room as it is for water to run down hill.

QUEENLESS COLONIES IN SPRING.

It is not unusual to find in any apiary one or more colonies queenless in the spring. Such stocks need not be lost nor the bees united to other colonies. Another queen should be procured as soon as possible from some reliable dealer in the south. This will not be a paying operation however, if the hive has become very much depopulated, as in that case there would not be enough bees to nurse and protect the brood. Before the queen is introduced, the combs should be carefully examined to see if there is not present an old queen, or a virgin queen which might have been reared after the laying or missing queen had either died or been superseded. If the bees have long been queenless, the fact may be determined by the manner in which the brood in the combs is capped. When a colony has been without a queen six weeks, there is usually more or less scattering brood in the cells. This brood is capped the same as any drone larvæ (raised caps) but is in the same cells in which the worker bees are reared. This brood is the work of "ferti'e" workers. In my opinion nearly every bee in the hive has a hand in laying these eggs, and not one particular bee. If there is a large number of bees in the hive it is safe in most cases to give them a queen, and at the same time take a frame of brood from some strong colony and place in the brood-nest. The bees of the queenless hive are probably too old to nurse the new brood, and the newly hatched bees will be needed to do such work. In all such cases of introduction of queens, use tobacco smoke.

ARTIFICIAL POLLEN IN SPRING.

I have always made it a practice to place some wheat flour in a warm corner in the apiary early in the spring for the bees to take into the hive to start the first brood.

In order to induce the bees to work in the flour, a very small piece of comb honey is placed in the box with the flour; this soon attracts the bees. When the honey is gone the bees commence on the flour, which is utilized in rearing brood, as in order to rear brood there must be pollen of some kind in the hive. As soon as natural pollen can be found, which is after a few warm days in April, the bees suddenly desert the flour. Place the flour in a deep box and cant the box so that the warm sunshine will furnish the needed warmth while the bees are getting the flour worked into little pellets on their legs.

On March 8 (1892) nearly all the colonies in the Bay State apiary were working in flour.

FIXED BOTTOM BOARDS FOR HIVES.

There are advantages and disadvantages in fixed bottom boards of bee-hives. The advantages are, however, decidedly in favor of the loose bottom. The beginner should not make the mistake when purchasing hives and get those having fast bottoms. Neither should anyone make the other mistake that all do who purchase and use single-walled hives. Doubled-wall hives are better for both winter and summer.

RETURNING AND PREVENTING AFTER-SWARMING.

It is quite a common practice to prevent the re-issue of second swarms by returning the swarm early on the morning of the day after that on which it issued. No killing of the queen is needed; leave that to be settled by the bees themselves.—*British Bee Journal.*

This is a good idea and if practised will save a good deal of work and trouble to the beekeeper. Understand that the *after* swarm is the swarm that issues after the first swarm comes off. When a second swarm does issue they should be hived in a convenient box, that is, a box from which the bees can be quickly and easily shaken from when they are to be returned to the parent hive. When ready to perform this operation, smoke the bees in the parent colony as well as the swarm, and dump the latter in front of the home hive. In my opinion towards night, the day after the swarm issues, is the best time to return the bees.

PURCHASING AND TESTING NEW THINGS IN THE APIARY.

Whenever a fellow is unfortunate enough to possess sufficient brains to invent or devise some new article for the apiary, he is, as soon as publicity is given to his inventive genius, pounced upon by certain well-known and many heretofore unknown parties, berated, abused and his invention called a humbug. This is the greeting nearly all have met the last forty years who have made an attempt to benefit his fellow beekeeper. If any proof of this assertion is needed, one has only to go back and look over the various bee-papers, beginning with the time father Langstroth invented the movable comb hive, to the time the last bee escape was brought to the notice of the beekeeping public.

Sometime within two years an automatic swarm-hiver was offered for sale. No sooner had it been described in the different publications devoted to bee culture than up jumps some half dozen fellows—"we have got a better one." Now every one of these "friends" cried "mine is the best" before any of their so-called inventions had been put into practical use, and up to date not one of them has ever self-hived a *swarm* of bees. Now is this an honorable way of doing business? Mind you, every one of these wonderful big-headed men borrowed the principle of their inventions from the first swarmer described. For a long time one man claimed that he had a perfect swarmer, one that would catch every swarm that issued, and he would describe it later on. "If it didn't work best of all he would throw it away." Well, the long promised description came. It proved to be nothing more nor less than Alley's drone-and-queen-trap with a small top-story attachment. When one had read the description of this wonderful device it was found that this swarmer had never hived even one swarm of bees. It caught the queen and a few bees. This is just what the queen-trap does that has been in use the last nine years. And so it goes. The familiar saying "credit to whom credit is due" exists only in saying so on paper.

With the introduction of new implements there is another class of people to contend with. Hundreds of people stand back and say "we'll let some one else test that thing, I won't." When a well-known beekeeper comes forward and says "I have invented an important device for the apiary" why not take hold and test it, considering the fact that the article is sold at a low figure and is a great help to the apiarian.

Put your brains to work, friends, and invent something that will help the beekeeper to obtain a profit from his apiary. Let the old fogies blow. Let those fellows who cry when asked about a new thing "no I don't use it and don't care to even see it," go to the dogs. They are the fellows who are all bound up in themselves and are of no benefit to mankind or the public generally.

One prominent beekeeper was seen

at the Albany convention. The subject of Punic bees was being discussed by the "prominent" bee man and some half dozen others. Says one to P. B. M., "Shall you try the Punic bees?" "No!" was the reply. "Why"? "Don't want them." "Well, why not?" "Cause I don't." "Because I don't" was all the argument the fellow had to offer. Now suppose all beekeepers were like that prominent bee man? Why, we should all be keeping bees in box-hives and nail-casks. I believe in progression, and in trying anything from a new race of bees to a house-apiary. It won't do for all to wait for some one else to go ahead. Take hold and push experiments with all your might. Strike out, brothers, and make a mark somewhere.

One prominent supply dealer and queen dealer "here in Massachusetts, and one whose father reared and shipped the first Italian queens ever sold in this country, never tested the drone-and queen traps till the season of 1891. Now what does he say? Why, "*they are the best thing he knows of used in the apiary.*" There are thousands of beekeepers whose petty prejudice is keeping them from using the queen-trap. It was many years after the trap was introduced before A. I. Root could be induced to manufacture and sell them. Last year his sales were over 500, no doubt they will reach more than 1000 traps this coming season.

SOME OF THE HUMBUGS IN THE BEE TRADE.

There are some humbugs in the bee business. When a fellow drives up to your door and says he wants to show you a moth-proof bee-hive, you just want to look out for him. Don't invest $5 in a patent right of that kind. You will be sold if you do. There is no such thing as a moth-proof bee-hive if bees are put in it. And there is no such thing as a colony of bees being destroyed by moths unless a colony has been queenless a long time, and the beekeeper is a mighty busy or careless man. A good colony of bees is not only a sure but the best preventive of the ravages of the bee-moth. When a fellow wants to sell you a receipt for compounding a food to feed bees that will produce two pounds of pure white clover honey by feeding one pound of syrup, kick him off the premises.

BEE FEEDERS.

A good feeder in the apiary is a thing to be greatly prized. Dr. C. C. Miller has one made on just the right principle. Nevertheless, if they are all made like one sent me by the T. W. Falconer Mfg. Co., they are as worthless as a feeder as a common basket. I can credit the above-named company of always doing good work till I received that feeder. When the Miller feeder is properly made, I think it is the best one on the market. The feeder is made so large that enough syrup can be given the bees at one time to carry them through the winter. It is placed over the frames and then covered up in the same manner a colony of bees is when packed for winter.

I shall offer these feeders for sale, and make them in a substantial manner. Cheap and sham-made goods are a a nuisance in the apiary.

A G. Hill is also offering a good feeder for sale. They are made of tin, and are placed over the combs, the bees sipping the syrup from the under side.

BEE SMOKERS.

Those fellows who say they can get along without a smoker are the ones who tie down their trowsers legs, put on several great coats, rubber gloves, and all the veils found in the house when the temperature is among the nineties in the shade, in order to hive a swarm of bees. They consider all that rigging far cheaper and more convenient than a fifty cent smoker. This class of beekeepers can occasionally be found.

Well, now no such arrangement is needed in order to handle even the most vicious colony of bees. Arm yourself with a good smoker and go at the bees in man fashion, and with a determination to conquer. Never mind about

one or two stings. Bee stings are something that one can soon get accustomed to. With some dry rotten elm wood, and a good smoker I can conquer any colony of bees in the world. Mind you, the wood must be dry and the smoker have a good, easy and free draft. Thus equipped I can drive the smartest hive of bees out the yard or make them submit to my will.

About the smokers. All are good, yet there are some better than others. The Clark has its advocates; the Hill is strongly endorsed and recommended, but for use in the Bay State apiary, give me the Bingham and Hetherington. Now this smoker may not be any better than some of the others named. I have used one a good many years, and know they are good. Like everything else, the smoker must be used awhile to work it to the best advantage.

WORKING AN APIARY FOR EXTRACTED HONEY.

Surely I would produce extracted honey if I had a market for all I could raise. There is more money in extracted honey at eight cents per pound, than in comb honey at double that price. It is not much work to care for extracted honey unless it is thrown out before the nectar is properly ripened by the bees. Honey is not ripe until it is capped, unless the weather is very dry for a long time; in fact, dry all the time the bees are gathering. If thrown out before capped, a process of ripening must be adopted.

Honey known to be pure, put up in neat jars holding from half a pound to one pound seems to be the favorite package to use. Very few people care to purchase over half a pound of honey at one time. The name of the apiary, as well as the producer's name should be on each package, not only as a guarantee of purity, but as an advertisement for the beekeeper. This also applies to comb honey.

HOW TO PRODUCE EXTRACTED HONEY.

The usual way to run an apiary for extracted honey is to tier one set of brood combs above another with a metal queen excluder between the two hives. My plan would be to have an extra set of combs at hand. Would remove the set from which the honey is to be extracted and immediately place the empty set on. In this way the bees would not be much disturbed in their work. Would then extract the honey and have the combs ready to use on the next hive.

The bees can be brushed or shaken off the combs in front of the hive they belong to.

Another thing I find will work successfully. If honey is coming in slowly I would work the "jump" plan on many of the colonies. This is to remove in the middle of the day several colonies to a new location, leaving one to catch all the bees returning from the fields. If one set of combs does not furnish all the storage room such a colony needs, add two or more sets of combs. The practical and profitable way is to get all the honey when there is honey to get. To obtain the best results in honey from any hive of bees there must be workers in great numbers. Small colonies do not store, nor gather a great amount of honey.

PREVENTION OF SWARMING.

This is also an important question with beekeepers. No two entertain the same ideas and opinions as to the best methods of preventing swarming. Certainly no practical method has as yet been brought out for the prevention or controlling of natural swarming. We have been told of the queen-restricters, of clipping the wings of queens, or the "jump" method and how swarming is prevented by extracting from the brood-chamber, etc. Well, in a measure all the above operations have some effect to retard and prevent the issuing of a natural swarm.

Of all the plans above mentioned for the prevention of swarming, that of extracting from the brood combs is the most effectual. The disturbance to the queen, bees and brood-nest by removing

and extracting the honey from the combs has much to do with breaking up the desire to swarm. When an apiary is worked for section honey, it is not practical, nor is it convenient or advisable to disturb the brood-nest at all. A colony seized with the swarming fever will surely swarm, even though there is an unlimited amount of surplus room in the hive. It is under the last-named conditions that a method is wanted for the prevention of swarming. Pardon me if I mention the queen-trap in this connection. I speak of it as it is the only thing that will serve the apiarist when he has his hives all equipped with sections, and is either away from home, or very busy. When these conditions exist the trap will show up for all it is worth. If at home and not ready to attend to hiving a swarm when one issues, it will not be necessary to do so if the trap is a trap on the hive. In fact, if a swarm issues from a hive having the sections on the combs ought not to be disturbed for three days, at which time the queen cells should be removed, and the queen that came off with the swarm reintroduced. Any other queen will do just as well and can be safely given the bees if a change of queens is desirable. No swarm will issue from that hive till the next season.

Several years ago I claimed that a colony of bees having one of my queen-traps at the entrance would store more honey than a colony that had a free entrance. I now have a statement and figures from a prominent and practical beekeeper confirming that claim. It will soon appear in these columns.

"There was not the usual crop of new bee-papers started last month that the new year generally brings," says *The American Beekeeper* for February.

Pretty smart for our little year old Brother. But it reminds one of a little boy running around with his grandfathers' great coat and boots on all the same.

AMERICAN APICULTURIST

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EDITORIAL NOTES.

A simple request on a postal card to discontinue the API will be heeded by the publisher.

One enterprising beekeeper has sent a club of six new subscribers to the API. He will receive therefor a fine Punic queen. Those who will take the same trouble shall have such a queen to reward them for their efforts.

Brothers Newman, Hutchinson and Hasty have got into a wrangle over a sugar-and-honey article that E. M. Hasty wrote for one of the bee-papers. Let them go it. Here's two to one that Brother Hasty comes out on top. If the editor of the paper that published that obnoxious article possessed as much sagacity as the editor of the *Am. Bee Journal*, said article would have gone into the waste basket instead of his paper.

The editor of the *British Bee Journal* has had an attack of *La Grippe*, so says the *A. B. J.* That was evident long before it was advertised by Bro. Newman. He will have another attack of something worse than *La Grippe* when that forty-five page article by Mr. Hewitt meets the eye of the man who knows so little and so much about Punic bees. Now be fair, Brother Newman, and let the public have both sides of the question. Don't throw that long article in the waste basket. Of course the truthful statements it contains bears rather hard upon your friend across the water. Never mind about that; the truth should be told considering the fact that but half the story has been published in the *A. B. J.*

It appears that quite a number of virgin queens were sent through the mails the past season to be mated in the yards of the purchasers. It would be interesting to know what proportion of them became laying queens. I have only heard from half a dozen of them and only one of the number lived to lay eggs. Mr. D A. Jones claims that there is much virtue in introducing virgins "after night." Mr. Alley uses tobacco smoke, and Mr. Pratt recommends little spiritless nuclei. According to my observations the latter will succeed best. If you want to introduce aged virgins the smaller your nuclei the better your success will be. But in my opinion until we learn more about introducing virgin queens, the safest way is to use queen cells.—*G. W. Demaree, in Beekeepers' Guide.*

Will Brother Demaree please tell the public who is meant by "until *we* learn more about introducing virgin queens, etc. ?"

The writer would like to visit Bro. D., at his apiary, and in a five-minute lesson tell him all there is about introducing virgins or any other queens successfully. It won't take longer than five minutes to give Brother D. all the points, so simple is the method.

After thirty years success in introducing virgin queens, *we* guess *we* shan't have to wait until *we* know more about it. What do you think about it, Brother D.?

All queens, whether fertile or virgins, are introduced by the same method here in the Bay State apiary. We never put cells in nuclei when they are queenless, if there are any nursery cages at hand with no cells in them. It is much safer and more convenient to introduce virgin queens than queen cells. No one knows what sort of a queen will come from a cell; but one can know that a virgin queen is large and well developed before she is introduced. Bless your soul, Brother D., there's no more danger of virgin queens being destroyed when introduced to strange bees, than there is of your being harmed when introduced to some friend.—ED.]

Subscribe for the Apiculturist.

I don't like to spoil a good thing, but when one claims he is the first one to use a certain method, it is just as well perhaps to set him right. Mr. Massie was not first to make public the following way of wintering bees.

In the articles by T. K. Massie which have been running in the BEEKEEPER, it will be seen that he advances this theory of having the boards glued down, and protecting the hives, sides and tops with cushions made of some non-conducting material. Friend Massie published this theory in the *Bee World* long before Messrs. Pierce, Root or Quigley ever gave their ideas to the public. Friend Massie certainly has priority on this theory. He not only advocated it but "practised what he preached," for he had closed end reversable frames with the winter passage through the top bars, and boards, made by us last winter —*Am. Beekeeper.*

Below is what Dr. Tinker said in the API four years ago:

Bees require free ventilation in winter. They throw off a large amount of moisture in their breath that must have a ready means of exit from the hive or the bees will become restless,—a never-failing indication of something wrong. All undue loss of heat must be prevented and it can be easily retained by giving free bottom ventilation and allowing no upward movement of air except through wood or other very close porous covering. In my experience the best and most economical covering is solid unpainted wood. Simply place a thin board over the brood-chamber so as to leave a bee-space over the frames in time to have it well propolized and I will guarantee it to hold the heat to the comfort of the bees and at the same time give an almost unobstructed exit to all moisture, and that too, directly through the board and the propolis.

I am prepared to say from ample experience that every kind of upward ventilation through free openings or loose porous coverings is pernicious and liable to disaster; for the life of a colony of bees subjected to cold goes out with the loss of heat which is forced strongly upward through free outlets by the pressure of cold air coming in at the entrance. We can now see why bees instinctively stop up all crevices with propolis.

Mr. Massie must have been knowing to this, as he had been a regular reader of the API many years before the publication of the *Beekeeper* or *Bee World.*

ADVERTISEMENTS.

I have prepared an illustrated circular which will be mailed free to all who desire my Italian, golden Carniolan and Punic queens. Punic queens rear.d from imported mothers only. Prices of hives, smokers, drone-traps, automatic swarmers, foundation, and in fact of all necessary articles used in the apiary given in my list.—HENRY E. ALLEY, *Wenham, Mass.*

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I wish to call attention to the PUNIC BEES for your trial the coming season. All Queens will be bred from the original Punic stock imported by me in 1891. All Queens guaranteed first class, and introduction sure when directions are followed. Warrante i Punic Queens, $3.00 each; two at the same time, $5 00. Virgin Punic Queens $1 00 each; $5.00 per 1-2 dozen. Introduction guaranteed.
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WAUZEKA MFG. CO., Wauzeka, Wis.

PUNIC BEES.

The August (1891) issue of the API contained a long description of this new race of bees. The demand for that particular copy of the API has been so large that the supply has become exhausted, and it is necessary to again give a description of these wonderful bees for the benefit of our new readers.

As this new race has been in our apiary since July, 1891, the statements below are founded on the experience the writer has had with them.

The Punic bee, *Apis niger*, is smaller than our native black bees, or Italians. The young bees are the color of green ebony, shading off to true raw ebony to polished ebony when old and all hairs are worn off them.

Their qualities are: 1st. They are the tamest bees known.

2nd. In crossing with other races, this quality is very marked.

3rd. They are the hardiest bees known.

4th. They do not fly into the snow like other bees.

5th. They begin work before sunrise and have the ground picked over before other kinds are on the move.

6th. If the day is rather dull, or cool, they will be working in full blast though no other kinds of bees will be flying.

7th. The queens are very prolific.

8th. In a fair season the smallest nuclei will build up without feeding into a grand good stock for winter.

9th. They beat every other kind in their working energies.

10th. It is claimed they will fill and seal sections fuller, and cap them whiter than any other bees.

11th. For extracted honey they have no equal.

12th. They cluster well on their combs, spread evenly over them, and shake off readily.

To sum up, we have a bee, docile, hard-working, prolific, and best for comb honey. They have many other good points, that are more in favor of the queen breeder, horticulturist, etc., than the honey producer; this being the party to appreciate the Punic.

If a pure Punic drone mates with a queen of any other race, the resulting bees almost equal pure Punics for honey gathering, and in other respects the cross is very marked.

I have never seen their equal in building comb, which is nearly always worker, as white as snow. Their brood is always compact and sealed in such a manner that I could easily pick out a frame of Punic brood from among a thousand.

In "building up" all we have to do is to see that they have plenty of stores, if not, then feed them as rapidly as possible and let them alone.

All the Punics require is plenty of room, and sure enough they will find it if left alone.

I have tried Palestines, Syrians—Italians, Cyprians and Carniolans with the results that I find that the only bees which excel are the Punics. Yellow Carniolans are a good strain and stood first on the list.

Mr. Hewett claims that it is quite a regular thing for a first swarm to leave 200 queen cells behind, while 600 is really nothing to be surprised at. If a frame filled with drone foundation, or a drone comb cut down to midrib, is put in a stock about preparing to swarm, every drone cell will be worked out into a queen cell, that is vertically, but hexagonally, and when sealed every beekeeper would say it was drone brood that was sealed over. I think it is quite possible to get 2,000 cells sealed in this manner.

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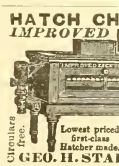

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THIRTY YEARS AMONG THE BEES.

This is a work of seventy-two pages giving the author's THIRTY YEARS' experience in rearing queens. By Henry Alley, Wenham, Mass. Price by mail 50 cents.

The methods of rearing queens as given in the above work are brought down to the year 1892. All prominent and successful queen dealers use the methods for rearing queens detailed in this treatise.

More than 5000 copies of THIRTY YEARS have been sold to keekeepers in all parts of the world and the demand continues. The book not only teaches the most practical methods of rearing queen bees, but it contains all the information any beekeeper needs concerning the care of queens, queen cells, and introducing queens by practical methods.

THE BEEKEEPERS' DIRECTORY.

This is another book that should be in the hands of every beekeeper. The work contains 134 pages and, like "THIRTY YEARS AMONG THE BEES," profusely illustrated It gives the practical part of bee culture. The subjects treated are given in the index found on another page of this paper.

With these two books one has all the needed information to conduct the largest apiary and produce honey by the tons, or rear queens by thousands. Address Henry Alley, Wenham, Mass.

Below is given an index of the subjects treated :

A.

Advantages of leaving sections on hives; age at which queen will be superseded; artificial increase of the apiary.

B.

Bee-hives; best way to keep honey; brood-combs, care of; brood-combs, filled with honey, care of; brood in the sections.

C.

Can swarming be prevented? cell-cups, how started; cleansing flight in winter; clipping queens' wings; conditions necessary to construct queen-cells; contracting entrance to promote brood-rearing; contracting the entrance; combs and eggs for cell-building, how prepared; crating honey; cellar wintering.

D.

Destroying drones; dividing swarms, when two or more cluster together; double-wall hives; Dr. Tinker's hive; drone-and-queen trap; drones, how to produce late in the season.

E.

Easy method for the inexperienced for rearing queens; entrance to hive, size of.

F.

Fastening foundation in frames and sections; feeding; forming nucleus colonies; frames, how many to a hive?

H.

Hay cushions; hibernation, how secured; hiving swarms; hives, tiering sections on; honey, care of; honey house; honey sources; honey, where to find a market; honey, where to keep when taken from the hive; how to find a queen; how to know that a colony has a good queen; how to make cell building a success; how to manage an apiary; how to prepare bees for the harvest; how to prepare food for bees; how to preserve a queen several days after being received by mail.

I.

Introducing queens.

M.

Materials required in cell-building; mouldy combs.

N.

Natural stores; nuclei, forming of.

P.

Packing in winter and its disadvantages; partly filled sections, care of; preparing combs and eggs for cell-building; prevention of swarming.

Q.

Queen-cells illustrated; queenless colonies, how recognized; queenless colonies, how to treat them; queen-rearing.

R.

Rearing queens in full colonies; rearing queens in full colonies without depriving the bees of their queen; re-queening after the issuing of a swarm; reversing to prevent swarming; robbing, how known; robbing, how to guard against.

S.

Sections; section cases; sections, when to put on; sections, when to remove; shading hives in winter; spreading brood; spring dwindling; spring feeding; spring packing; standing, or closed-end frames; stores necessary for winter; success in wintering; sugar syrup for winter stores; swarm controllers; swarming, how prevented.

T.

Temperature of cellars for wintering; tiering sections; to get bees out of sections; too many drones a burden to the apiary.

V.

Ventilation in winter.

W.

What constitutes a good-beehive? when a swarm issues, how to manage; when to reverse sections; when to supersede queens; when to unpack hives; winter ventilation for hives; wintering bees; wintering in cellar.

BEES BY THE POUND.

A few orders are received each year for bees by the pound. My price for one pound of bees is $1.50. Price of queen to be added.

The bees will be shipped by express in a wirecloth cage and provisioned for a journey of ten days. Safe arrival guaranteed.

Alley's Improved Automatic Swarm-hiver.

Sometime ago it was stated in the AMERICAN APICULTURIST, I had so improved the Self-hiver that it would prove successful in hiving ninety-nine per cent of all swarms issuing where the hiver is used.

During the swarming season of 1891 experiments were conducted in the Bay State Apiary with various devices for hiving swarms of bees automatically.

The Self-hiver sent out in the season of 1890 failed to self-hive *all* the swarms that issued through it. The queen could not seem to find her way to the new hive through the cone-tube at the end of the swarmer as readily as she does the tube in the drone and queen trap. We saw at once how to remedy the trouble.

It was also found so dark directly over the tube in box B that the queen could not find her way into that box. To remedy this little defect, an opening one and one-half inches in diameter, covered with wire cloth, is made directly over tube A. With this improvement, the swarmer has not failed to catch every queen that has issued with a swarm.

When a swarm issues the queen is checked at

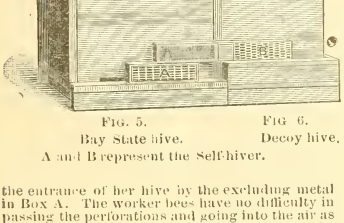

FIG. 5. Bay State hive.

FIG 6. Decoy hive.

A and B represent the Self-hiver.

the entrance of her hive by the excluding metal in Box A. The worker bees have no difficulty in passing the perforations and going into the air as they usually do when a swarm issues. But the queen being much larger cannot pass the metal to take wing and join the swarm. When the bees find they have no queen with them they at once return to the location from which they started. In the meantime a few young bees have followed their queen into trap B and the returning swarm join her and enter the new or decoy hive, thus hiving themselves.

When the queen comes out into box A she readily finds her way up into box B, and then through into the hive. When she has once passed through either one of the tubes she cannot return.

The reader, of course, understands that box A is placed at the entrance of the hive from which a swarm is expected. Box B is placed at the entrance of the new hive, or at the entrance of the decoy hive the new swarm is to occupy. The two hives are thus connected by box B. All outlets to the home hive except through the metal must be closed to prevent the queen from taking wing and joining the bees.

The Swarmer, as now made, is adapted to most all styles of hives in use. In some cases it will be necessary to make some slight changes in its construction. For this reason we advise all who wish to use the Swarmer that the better plan is to buy an individual right to make and use them. Then get out a model of the Swarmer to fit your particular hive and send to the nearest supply dealer for your goods, providing of course he can supply them.

Will say to those who purchased the Swarmers sent out last year that they can easily be altered to the new style as described above.

Directions for using the Self-hiver.

Place the Swarmer at the entrance of the hive about the time a colony is strong enough to swarm. Twelve days after the first swarm issues the Swarmer should be removed.

These directions also apply to the use of the drone-and-queen trap.

If many drones are entrapped in either the swarmer or trap, they should be removed. Early in the morning is the best time to do it.

If box B is not long enough to connect the new hive with the old one just make a larger box, using the same cone tubes.

Prices of Swarmer.

Per dozen,	flat,	$5.00
Per fifty,	"	20.00
Per hundred,	"	30.00

Sample Self-hiver by mail, $0.50.

Directions for using the swarmer sent with each hive.

An individual right to make and use the SELF-HIVER will be sold for $5. Sample Hiver mailed free to the purchaser.

A beekeeper living near here bought one of your swarmers and placed it on a hive according to directions, and went out to his work, ploughing. When he returned home his bees had swarmed and were at work in the new hive and all right without any trouble to him.

Cumming, Ga. JOSEPH P. SEWALL.

FRIEND ALLEY: Swarming time is now over with me and I take the pleasure to report to you that the Aut. Swarm hiver is the boss. The first time I tried it, it didn't work. The hive was a portico hive and I could not adjust right. Since then I have used it on hives without portico to my greatest satisfaction. I deem it the best swarming device.

Thorndale, Texas. OTTO J. E. URBAN.

On Saturday, March 28, 1891, I placed one of Mr. Alley's Self-hivers at the entrance of a hive from which I knew the bees would swarm in a few days; near this hive was one prepared to receive the new swarm when it issued. On Sunday afternoon about four o'clock, in walking through the apiary, I saw the bees at work in the new hive. They had swarmed and hived themselves and were working nicely, without any assistance whatever on my part, except to make the necessary preparation for them. This self-hiver will certainly be a wonderful help to beekeepers.

By the use of the drone-trap and queen cage combined, which was invented by the same gentleman, I secured forty-eight swarms out of forty-nine, in 1888, without so much as having to cut a single twig in hiving them.

MRS. SALLIE E. SHERMAN,
Salado, Bell County, Texas.

When the *Norwegian Bee Journal* came to hand containing the obituary of the late Ivar S. Young the API was obliged to hunt up some one who could translate the article. The same paper that contained the news of the death of Mr. Young also had a fine likeness of him. A young Norwegian was found in a store in Salem, Mass., and when shown the paper at once recognized the likeness as that of a man he had met in Christiania, Norway, nearly every day for several years.

OUR NEW CLUB AND PREMIUM LIST.

We club the AMERICAN APICULTURIST with any of the papers below named. The regular price of both is given in the first column.

The American Apiculturist,	$0 75	
With Gleanings in Bee Culture,	1.75	1.50
" American Bee Keeper,	1.25	1.15
" American Bee Journal,	1 75	1.75
" The Apiculturist and one sample Drone-and-queen trap, by mail,	1.40	1.00
With sample Swarmer.	1.75	1.25
" Thirty Years Among the Bees and Beekeepers' Directory,	1.75	1.00
API and Italian Queen.	2.25	1.50
" " Golden Carniolan,	2.75	2.00
" " Punic Queen.	3.75	3.50

New subscriptions to APICULTURIST will begin with Aug. number.

Money for queens need not be sent till the queens are wanted.

Five copies of API one year. $2.50.

Remit by money order on Salem, Mass., P. O., or by check.

Our new illustrated Price-list and Circular now ready to mail. Sample copies of API mailed free.

Address Henry Alley. Wenham. Mass.

Goodness! talk about the dark Carniolans swarming themselves to death, just read the following:

Mr. Robert McEwen says that he had a colony of Italian bees that cast a swarm on June 10, a second swarm on June 20, and a third on June 22. The third swarm left for parts unknown; the first and second swarms each swarmed twice, and the old colony cast two swarms in July. Besides, Mr. McEwen says he got forty pounds of section honey from the old hive. —Renfrew, Scotland, *Journal*.

Where are the Carniolans compared with the above record?

RUBBER PRINTING STAMPS.

Best nickel plated self-inking stamp, with ink, pad, and one or more lines of letters, 50 cents. Has letter plate 3-4x2 inches. No. 4 has letter plate 1 1-2 x 2 1-2 inches, large enough for your business card or envelopes, letters, labels, sections, etc., $1.50.

50-page catalogue of rubber type stamps, etc., for a two cent stamp.

MODEL STAMP WORKS,

Shenandoah, Iowa.

THE LONE STAR APIARY

sells queens and bees at the following low prices: Untested Queens before June 1st at $1.00, or $10 per dozen; after June 1st, 75 cts. each or $8 per dozen. Tested Queens before June 1st, $1.50 or $15 per doz.; after June 1st, $1 each or $10 per doz. Three frame nuclei and Untested Queen, $2.00. Two frame nuclei and Untested Queen, $1.50. Full colonies, $6 before June 1st; after $5, (in Langstroth hives.) My bees are bred from the best blood procurable in this country, 3 and 5 banded Italians. If Queens from imported mothers are wanted it must be stated in the order, otherwise American bred stock will be sent.

OTTO J. E. URBAN, Proprietor,

Thorndale, Texas.

EVERY BEE-KEEPER

should send to the largest and best equipped bee-hive factory in Massachusetts for free PRICE LIST, which will explain

SOMETHING NEW IN THE SUPPLY LINE,

that all beekeepers will want.

We make the best **DOVE-TAILED HIVES,** best **COMB FOUNDATION,** best **SECTION BOXES,** and the best line of BEE SUPPLIES of any one in Massachusetts, and sell them the lowest. Address,

DUCKEY BOX CO.

or F. M. TAINTOR, Manager. GREENFIELD, Mass.

THE AMERICAN APICULTURIST.

A Journal Devoted to Practical Beekeeping.

VOL. X. MAY 1892. No. 5.

DIFFERENCES OF OPINION.

Last season I read advice from E. L. Pratt saying not to bother with chaff or flour as a substitute for pollen in early spring. Again some one else advocated its use. Then comes in some novice and says, "The doctors don't agree." Men of high reputation give directly contrary advice. Some one is wrong; may not both be right and both wrong?

My first experience was in a field, where natural pollen was always abundant in the hives, and also in the fields when the bees could go after it. Between the hive and field supply there never was any lack. Nevertheless, when the advice came out to feed flour I put some out, but not a bee would touch it. I caught a few and showed them where it was, but they at once skipped out. Then I put honey in the flour to "start them," and they licked out the honey, but no more. Later I have been in a field lacking in pollen, and a hundred colonies of bees would consume chaff or flour about as greedily as honey at times.

Now, whose advice was right? Can't you see the point?

Doolittle uses one system, and Dadant still another; each says he is right; his hive and system are the best. But the novice, and even many who should know better, say if one is right the others are wrong. It is not necessarily so. Each may say or think his hive or system the best; yet, each knows and acknowledges that the other is a reasonable success. The hive don't do it, neither does the system of management, only in so far as that system recognizes and utilizes the underlying principles necessary to success.

As in the matter of pollen, so in many other ways does location decide what we should or should not do.

I used to read, "What can I do to prevent swarming during the white clover honey flow?" I had no white clover, but only a fall flower. My bees gave so little trouble I had about concluded to cry Eureka, and go into the queen business—a regular "non swarming strain." I waited another season, and saved myself much humiliation. That season I had a white clover flow, *i. e.*, a summer instead of fall flow of honey. Then I found out the difference. My bees swarmed just like others. Now can you tell why many generations previous my bees had been "non-swarmers?" They are both swarmers and "non-swarmers" now.

If you have only a fall flow and run for extracted honey it is very easy to control swarming, even so far as to say it is a practical success. But just try the same stock one season with a June or July flow, and run for extracted honey and see if it is a success. Or run for comb honey with a June flow, and nine times out of ten you will "climb a tree," or—or—something else, after swarms.

I once read that a man could not make a success of any business in less than five years, experience, *i. e.*: We can't learn enough about a business in less than five years to make it a real success. I believe to-day it is true. Yes, some men do succeed in less time. But the majority of those who do succeed

owe their success rather to favorable circumstances than to a real knowledge of the business, and where one succeeds many fail; some statisticians put the failures as high as nine out of ten.

We should not get wrathy and fly in others' faces because they seem to advocate that which is contrary to our experience. The fact that "doctors" do "disagree," and so radically too, is proof that even the best of us are not yet masters. I have been for fifteen years trying to keep up with the rapid strides made in the knowledge of our pursuit, and still I run just as hard as I used to. If we would succeed we must know why it is that many can and do succeed; and yet they would seem to be practising almost opposites in both system and hives.

Then we may be able to stumble on to fine success, and yet not know how to reconcile those seeming differences. I dare say that any one of the apicultural lights can tell you why the others succeed.

If we would succeed we must attain to such knowledge; then we can work intelligently and not blindly.

Loveland, Colo. R. C. AIKIN.

Brother Aikin takes it for granted that Doolittle, Dadant and others have made a success of beekeeping. These well-known beekeepers have as many failures as any beekeepers in America. No matter how much experience a person has had with bees, experience affords no relief so far as controlling the weather, or causing honey to secrete in the flowers. Should Doolittle drop his pen and queen rearing he would to-day be as badly off as others in the bee business.—ED.]

INTRODUCING QUEENS TO HATCHING BROOD.—A WOMAN'S WAY.

"Oh! yes, you might know it was a woman; a man would not bother with any such puttering nonsense," I hear more than one reader say.

All right, just turn the page and skip this then; it is not intended for you any way. If a man wishes to improve his bees by introducing new blood, he can send the necessary dollar for the queen, and if he fails and loses her in introducing he can get a dollar's worth of satisfaction by "blessing" the dealer who sold him the queen, and forget all about it.

With a woman, however, it don't work just that way. She may feel like giving the dealer a piece of her mind, and perhaps may do so; but no matter what she does the ghost of that lost dollar will still continue to haunt her.

I do not wish it understood that I always use this method, or consider it best for all beekeepers, but for those who have not money to spend for a dozen queens, more or less, to experiment on, and learn by experience the many ways in which a queen may be safely introduced (or lost), I will give the method which for me, at least, has never failed:

1st. Send to some reliable dealer for your queen. When she arrives look at and admire her all you please, but don't open the cage so she can get out till you are ready to place her in the hive.

2nd. Prepare your hive. Any hive that can be closed bee-tight will do. If a large hive is used it is well to place a division board just far enough from one side to make room for the three or four frames you will use. If you have a small hive it is more convenient to handle and easier to carry. A box just large enough to hold three or four frames, with a board one foot wide for a cover, is what I use for a small hive. Tack a piece of wire cloth over the entrance, and be sure there is no crack through which a bee can escape, and your hive is ready.

3rd. Get one frame of honey and two or three frames of hatching brood, selecting frames having as little unsealed brood as possible, as all unsealed brood will be lost. It may be necessary to look over several hives before just the right kind of frames are found, but it will do no harm if each frame comes from a different hive. Brush off all the bees and place the frames in your hive, the brood together, the honey on one side. Now open the cage containing queen so her ladyship and her at-

tendants can get out, place the cage inside the hive and put on cover tight.

4th. If the weather is cool set the hive in the house or somewhere that it will keep warm, especially at night. If *very* warm keep in the shade during the middle of the day. In a few days enough bees to form a little cluster will be hatched.

5th. Do not open the entrance for about a week, then open it just a little before night. Unless plenty of honey is coming in it will be necessary to keep the entrance closed except a little while before sundown for a week or more, or robbers may storm the castle. By the end of the second week there will be plenty of bees and brood from the new queen in the hive. These new swarms should be fed, either by giving frames of honey from other hives, or with sugar syrup, till plenty of young bees are able to go to work in the field. Sugar syrup may be fed very easily even if you have no expensive feeder. One way is to fill a bottle with syrup, tie two or three thicknesses of muslin over the mouth and lay on the top of the frames, or place anywhere in the hive where the bees can get at it.

I know this method is considered by many as too slow and expensive; but I look at it thus: One queen safely introduced, even if it does take a little longer, is cheaper in the end than half a dozen failures.

After the new queen gets to laying well it is an easy matter to get queen cells from her eggs, which may be used to requeen as many hives as you please.

Now, friends, if you have never tried this plan, and would like to improve your bees and at the same time gain some pleasant and profitable information regarding our little workers, just send for one queen and try it. After the queen has become reconciled to her new home (sometimes it may take several days) there is little danger in opening the hive at any time as they rarely try to sting if *carefully handled* from the first, and may be examined without smoke or protection for hands or face, for a long time. In fact, careful handling in my opinion, has a good deal to do with the disposition of our bees; but lest this article should be like the artificial honey we hear about, too much wax to hold a little bit of honey, I will not draw it out any longer.

MRS. A. L. HALLENBECK.

Millard, Neb.

BEEKEEPING IN DIXIE.

As you have heard from all parts of the world but the state of Georgia, I would like to tell you of some of my experiments with bees. I have been studying bee culture more or less for years, and last year I gave it my whole attention. In the spring I selected eight colonies to experiment with. Commenced in March to feed to promote brood rearing. The first of April I had eight rousing colonies. I put on sections and the bees commenced work in them. By May 20th, I had taken off 800 lbs. honey, 100 lbs. from each colony. By this time they had reared lots of drones. Now for an experiment with the drone-and-queen trap.

I kept the traps on four of the hives but none of the colonies cast swarms. At the end of the season I had taken off 1600 lbs. honey. The four hives on which the traps had been placed, each gave 220; while those colonies that had a free entrance gave but 180 pounds each. These are facts.

I intend to try the experiment again this season, and if by using a trap the colony will produce more honey, it will be a strong point in favor of the trap.

Here is another experiment I tried with the trap. I had a weak colony other bees had commenced to rob. I closed the entrance to a small space and placed a trap on the hive, and that was the last of the robbing.

Big Creek, Ga. W. M. GLOVER.

I have claimed that the trap will do all that Bro. Glover says he did with it. Now that the trap is used as a self-hiver in several ways, it should come into more general use.—ED.]

LETTER FROM MISSOURI.

BEEKEEPING COMBINED WITH OTHER PURSUITS.

There is much being said about combining other pursuits, profitably, with apiculture.

Since I have had experience in that line, I will give the readers of the Api the benefit thereof. I will begin at a time previous to beekeeping experience. I am a Pennsylvania Dutchman, came to Missouri in the year 1873, attended college two years, taught school one term, married, now have three boys and one daughter. My ambition is to give them a good education, and have them help pay their way, and as I have only 40 acres of land I am compelled to combine and concentrate so as to economize time and money. Well, in 1880 I had a severe attack of bee-fever. I chopped a bee tree, saved the bees, next year by purchase and natural increase I owned 19 colonies, mostly weak ones. I purchased "A B C of Bee Culture" which told me to double up, and winter in the cellar, so I purchased eight Simplicity hives, doubled up in August, put them in the cellar Dec. 1st, put them on their summer stands Mar. 25, 1882, and in four days they had *doubled up* into *one* colony. By this time I had read my "A B C, etc.," through, and of course I knew "it all," but I was not discouraged, I read my book again. I then found where it told me to begin with one colony, and not get in debt, and bees and money would come as fast as care and experience could bestow. I took the advice and found it correct. Now, then, for the "combine." I divided my farm as follows: ten acres in pasture; ten acres in meadow; ten in cultivation; ten in fruit, yard and truck patch. Now to combine profitably you must select such as can take care of themselves a part of the time; hence I keep two mares, two cows, a few good sheep and hogs, all of which need most of their care early in the morning and late at night, and in winter; then I keep three varieties of thoroughbred fowls, so you see there is a great deal of light work in which I can use my children to good advantage when I most need help. I also teach school six months in the year.

The above receipt is intended for a man like myself, who had not a cent when I came to Missouri in 1873, and who walked to and from college four miles every night and morning and paid for my board by working in the dairy.

In making your first start, always get the best you can afford, *thoroughbred*, if possible. And subscribe for and *read* a journal devoted to every avocation in which you engage.

When you work your corn the last time, sow buckwheat, it will afford an abundance of bee and fowl pasturage at a time when most needed.

Fulton, Mo. D. R. PHILLIPS.

REMARKS ON BEES, WINTERING, ETC.

I presume I might say a few words on the above heading, although it may not harmonize exactly with the opinions expressed in the Api, and possibly find its way into the waste basket; but as the Api has of late had quite an opposition in regard to "Punic bees," and I am rather inclined to think that the editor enjoyed it, so I venture to give a few ideas on wintering, as I see it. But before going any further I will just say a word about the Punic bees. I have two of these queens, but did not get them early enough last fall to test their honey-gathering qualities or their dispositions when handling. I think that they will compare quite well with the Italians. The queen is not as nervous as the ordinary blacks. I have quite frequently seen them depositing eggs in a comb after I have removed it from a hive. So far I think that they will be a bee that will winter well; mine are averaging with the best of my others. I feel anxious to know what they will do in getting honey next season; if they are as good as the Italians I think that

I should as lief have them; but if they are not as good, I shall be liable to make it known to my customers. I have noticed of late that the API says that cellar wintering will soon be a thing of the past; that the double-walled hive is soon to take the place of wintering in the cellar; also that bees do not dwindle so badly wintered out of doors, as they do where they are wintered in the cellar. Now to answer these questions much would depend on the climate where you are located. Away down here in Maine we cannot hardly agree with you. I find that those that winter in the cellar are ready for the honey flow first; for instance, I will call your attention to some of Maine's most successful beekeepers. Mr. Greeley of Clinton always had success by wintering in the cellar, his bees came out last spring in such a condition as to build up very early, on some hives he had to put two cases of boxes to give the bees room some time before the honey flow. Well, what was the result? He got 4800 pounds of honey while many others got none. Our honey here came in last season quite early, what little there was. I do not think such a winter as we had in 1890 here in Maine, that the double-walled hive could give bees much protection. Is cellar wintering soon to be a thing of the past? We must remember that this world is large, and there are many beekeepers, and many minds, and many inventions, and more to follow. We are all apt to think that we have it in our own mind. Now if I should tell you that by wintering bees in a cellar, that we could be able to winter them in a way so that every colony could be under the same conditions, and where one colony would winter, so would they all, and at an expense of $1\frac{1}{3}$ cents a colony per week, or counting them in the cellar five months at a little less than 30 cents per colony. This might place the double-walled hive where it would not pay to winter out of doors. Although they may be a good hive, and it may pay to have them for spring and fall and I dare say that they would do to put in the cellar as well as any, although they would be a little bulky.

Skowhegan, Maine. W. H. NORTON.

Double-wall hives, my friend, as now made are not bulky. The outside hive is so constructed that it is readily removed, and nothing but a brood nest and bottom-board need be carried into the cellar.—ED.]

HOUSE APIARIES.

MRS. AXTELL GIVES HER OPINION OF THEM; AND MAKES IMPORTANT SUGGESTIONS.

I have wondered that before this house-apiaries were not invented that were practical and came into general use; but few I think are now in use. I think they have been given up more because of the bees getting out into the room while being manipulated. The one you describe Brother Alley, strikes me as being about what would fill the requirements of the bees, except it seems to me the old fault of their getting out in the room might bother you by their flying to the light, and if turned out of doors would be chilled by alighting on other objects instead of their own entrance board. Could this objectionable feature be removed, I think house-apiaries would come to stay.

As they are more costly than single hives unless they combine more advantages, the average beekeeper would not care for them. I should want a house so built that small windows would be in front of each hive being manipulated and all others closed so the bees would all fly to that one window; then when that hive was finished a board-blind might be closed on the outside, the blind being an inch shorter than the window, leaving a small strip of light just above an opening into the hive where the bees would find their way back if the weather was too cool to throw the window open to let out the bees.

Second. The house should be built as cheaply as possible and have it strong and warm, the warmth to be gotten as much as possible by plastering, as no

amount of lining with boards or paper is equal to plaster for overhead and the sides; this is the experience of Mr. Axtell and myself in living in a tiled house for a time.

A double-wall filled in with sawdust would also be objectionable, as it would breed so many fleas; our experience in that line caused us to tear off a double-wall from our honey house. For several years we were so badly bothered with fleas it seemed they would kill me through exposure in searching for them and in the sleeplessness occasioned by them. This was before insect powder came around. Everytime I went to work with the bees I got fleas on me. I began to think the bees had fleas on them or in their hives; but one day I was sitting scraping honey sections in the honey-house and I could see them jumping around on the floor, and we made examination and found that was where they came from, as the walls between the rooms were packed with sawdust to prevent freezing in cold weather. It did not take us long to remove the outer walls from the inner one, making two single-walled rooms, which was the last of the fleas. I have heard of warm garrets in which bees were kept, small double rooms, or a room within a room. When honey was wanted the owner just walked up stairs and cut out a plateful at a time. I think such rooms have almost been entirely abandoned for movable comb hives that admit of manipulation.

HOUSE-APIARIES FOR WOMEN.

Could house-apiaries become practical, that is, so constructed as to meet all the requirements of the bees, I think more ladies would take to beekeeping, as some who would like the business are deterred from so doing from the dislike of being sunburned; they prefer to remain in doors at some business less remunerative and thereby have whiter complexions.

Some shrink from being seen laboring out of doors as if it were a disgrace, which if they had their bees in a house they would gladly give them the needed care.

Others would be induced to take up beekeeping if it is true, as some assert, that bees sting less when manipulated while in a house.

But for myself I should prefer to work out of doors, except in early spring, where I can have plenty of room and plenty of bright sunshine and fresh air with renewed health and vigor.

If we cared to have such a house as you have for "springing" our bees and when the cool days and nights come, we would not feel uneasy about them shut up away from the cold wind and frost that often causes them to contract and allow their brood to become chilled. On bright warm days you could give them their liberty to fly. It seems to me we might have rousing colonies at the beginning of the white clover or other early harvests. I have an idea that anything that would prevent the bees from flying in cold windy weather in spring, when there is but little pollen to be gathered would save the bees to protect their brood and be a great benefit to the colony, even on quite warm days. I have often known the winds to blow so hard that an immense number of bees must have been lost, when if they could have been retained in the hive without becoming uneasy would have been better for the colony.

Roseville, Ills. MRS. L. C. AXTELL.

HOUSE APIARIES.

No. II.

In a recent issue of the API appeared an article on house-apiaries. As I was about to build one, it being my hobby, the article came in at just the right time. Your plan of having the hives unattached to the building, and your mode of ventilating the hives are excellent. I should have followed Root's old plan. I am proud of the improvement. In the construction of the hive I have made a radical change. I find

this hive possesses many superior qualities. It winters well; will give double the amount of comb honey, and does away with the moisture in the hive, and all dead bees. Mr. Root says there ought to be no dead bees. Well, if he can prevent dead bees from accumulating in a hive in a protracted cold spell, he might tell us so, for we have paid him for it.

Toledo, Ohio. O. McNIEL.

PLANTING FOR HONEY.

Prof. A. J. Cook of the Michigan Agricultural College, assisted by the Department of Agriculture at Washington, has been experimenting along this line with a view of determining whether it will pay to plant for honey alone and this is what he says in a late number of the Gleanings, as the conclusion arrived at:

"I think that our experiments have shown that special planting for bees is not advisable. If a plant can be found that will surely grow, will secrete nectar in all weathers, will self-grow, and hold its own against weeds, etc., and needs no cultivation, such a plant might pay just for honey." Is there just such a plant? I read the foregoing to a bee-keeper present, and he said, "Yes, there is such a plant and it is sweet clover, Melilotus. It will grow on worn-out lands and make them rich again in four or five years. It embodies all the requisites the professor desires. I've noticed this plant growing on railroad cuts and keeping the gravelly soil from washing." The professor further states: "We have tried experiments this season that show most conclusively that bees are a blessing to the farmer and fruit grower. These latter should either keep bees or else beg the beekeeper to come. I am sure all will be interested in experiments that prove beyond peradventure that bees are essential is nature's economy."

FOUNDATION.

FLAT-BOTTOM AND WIRED FOUNDATION.

MR. HENRY ALLEY, DEAR SIR: — I send samples of comb foundation by this mail. An article in API, Vol. 9, page 163, leads me to think you have not taken any stock in the flat-bottom comb foundation, or you would come to a different conclusion regarding the use of full sheets in brood frames and section boxes. We claim credit for introducing wired foundation, and ask for an unprejudiced trial (mind you it is not wired frames with foundation rubbed on) of our wired foundation, in which every cell will be perfect and no sagging — the only perfect brood foundation in the world, and the thin, flat bottom the only foundation that is always free from fish bone in surplus honey when used in sheets full size of box. The use of *heavy* foundation in full size of box has injured the reputation of comb honey more than the use of Thurber's glucose in extracted honey. I don't know what foundation Proctor uses; but you can always be sure our flat-bottom foundation will not be objectionable in comb honey, when used in sheets full size of section, and it adds largely to the yield and uniform appearance of the honey. You can advise the use of full size sheets of our foundation in brood and sections, and we will shoulder the curses. The making of thin foundation on the natural bottom machine is so tedious that very little of it is made lighter than seven to nine feet to the pound, while ours is always twelve to fourteen feet to the pound, and the only wax that is perfectly cleansed that I have ever seen.

J. VAN DEUSEN.

Sprout Brook, N. Y.

I have used Van Deusen wired foundation and consider it the best made of any brand. If I desired to use wired foundation the Van Deusen would be the kind selected. The thin, flat-bottomed foundation cannot be excelled by any other in the world. I mean just what I say. No taffy in this.—ED.]

SOME PUZZLING QUESTIONS CONCERNING YELLOW CARNIOLAN BEES.

One argument advanced by those that think they have demolished the fact that golden Carniolans are a distinct type of *Apis mellifica*, is that the young queens must have gone over one mile, and perhaps to a greater distance, on their wedding flight, leaving plenty of Carniolan drones behind, in order to mate with Italian drones (and do it every time, too). I would like to ask what proof they have that virgin queens go that distance when there are plenty of drones at the home apiary, all eager to pursue the first queen that ventures forth. Give us the proof, gentlemen; not mere theory or surmises. Again, I would be pleased to have them do away (if they can) with the fact that the mating of the queen has been witnessed time and time again by the most reliable beekeepers, whose word no one doubts. How can they get round the testimony of such close observers as A. I. Root, G. M. Doolittle, Quinby, and a host of others, who have witnessed the act in the apiary, or immediate vicinity? I have no doubt virgin queens will go a mile, or even more, in search of drones, when there are no drones flying—as for instance, late in the fall—but when drones are plentiful, never. The idea is preposterous. Nine times out of ten the queen rarely leaves the vicinity of the apiary to mate, especially when drones are abundant in the home yard.

We know and have proof that queens mate right in the apiary and the immediate vicinity. Now, friends, give us some proof (*i. e.*, eye witness) that they mate as often two or four miles away, and we shall begin to think friend Alley was in error after all, and that his golden Carniolan queens were really mated to Italian drones, two miles and more away from home, and not one mated to a Carniolan drone at home, though the air was full of them.

I do not write this to defend friend Alley. He is able to take care of himself, and will do it no doubt. My aim was to show the absurdity of the claim that so many queens should be mated such a long distance from home, and that, too, in spite of intelligent efforts to the contrary to undesirable drones, where there are plenty nearer by for those they designed to mate with.

Belleville, Ill. E. T. FLANAGAN.

TIN IN BEE HIVES.

This is a subject that has received little or no attention of late, other than in regard to its use for separators. This arises, I believe, from the fact that beekeepers in the past pretty generally decided against its use in the brood-chamber, as being especially detrimental to a colony of bees in winter.

Now, I find in the past three years' experience, that depends almost entirely in the manner in which it is used. It has been and is yet asserted that tin in the brood-chamber causes dampness and is cold. This is a mistake. A thermometer placed in a room does not change the temperature of that room; it only indicates the *presence* or *absence* of heat. Just so with tin in a bee-hive, it only indicates the presence or absence of moisture by condensation, although this tin must be cooler than the moist air coming in contact with it before such condensation takes place. Now for three years I have used a frame with tin ends, formed into a channel, and I find no more dampness in these hives than in any others. "But, some one says there will certainly be some condensation on these tin ends, and then what will become of this water?" First, there is very little accumulates on these channel tin ends, from the fact that they are entirely enclosed within the hive, and the air of the hive circulates on both sides, consequently these tin ends are of the same temperature of the air in the hive. Second, what accumulates on these ends runs down on the bottom board and out, if excessive, lessening the amount to be absorbed by the packing just that much, where it would be

held, increasing the dampness, and in turn conducting the heat of the cluster away faster. LOWRY JOHNSON.

Masontown, Pa.

HOW TO DESTROY ANTS.

Those who are annoyed with ants about their hives and honey should remember that they may be gotten rid of by the free use of salt, says the *Indiana Farmer*. In the spring of the year, especially, ants will often be found in immense numbers above the brood chambers of the hives, between and over the honey sections. We are not conscious of ever having seen a colony of bees that we thought were harmed by the ants, but certainly no one wants them about when it can be prevented.

If the bees are of any strength, they will keep them away from the honey; it is the heat coming from the colony of bees that the ants are after, as this is a great help in hatching out their eggs. Although we have never known the idea to be advanced, we are inclined to the belief that the main reason why ants dislike salt, is because it is a preservative, and would prevent the hatching of their eggs.

Whether this theory is correct or not, it is a fact that salt plentifully used in a hive where they have taken up their residence will cause them to disappear. Crates of honey may be piled on the floor in a convenient place, and be in no danger from these pests, if salt is first sprinkled freely on the floor.

(Am. Bee Journal.)

RENDERING WAX FROM OLD COMBS.

S. H. HARRISON.

I have tried various methods and contrivances for rendering wax from old combs, and the best thing I have tried until now is Doolittle's solar wax extractor, which I tried last summer in Colorado; but having a small quantity of combs and fragments here that I did not wish to throw away, I began to think how I could do it best, and with the least cost.

One night after going to bed, the matter of a cheap wax extractor came into my mind (*a la* Doolittle), and the thought struck me, Why not have a tin spout made the shape of the tin part of Doolittle's extractor, only not so large, but perhaps a little longer, with a solid head at one end, and a bar of tin across near the other to hold it in shape; then take a piece of tin about $1\frac{1}{2}$ inches wide double over both edges, leaving the bar about $\frac{3}{4}$ of an inch wide, and long enough to bend in proper shape to form two legs, raising the end with the head in about 2 inches, and spread enough to keep the spout right side up.

Then take a piece of wire cloth, place it in the spout, pressing it to the bottom, but let one end rest on and over the bar across the lower or front end.

Put the combs or wax in the spout, or above the wire cloth, and (if the "better half" is good natured) set the whole in the oven of the cook-stove, placing a dish under the lower end of the spout, which projects a little from the oven, to catch the wax as it runs out. It works all right. Twenty-five cents is the expense of mine.

Mankato, Kan.

(Am. Bee Journal.)

BLACK BEES vs. THE ITALIANS.

IRVIN GROVER.

Statements like those of John H. Blanken, on page 253, hardly need a reply, but for those who are unacquainted with other races of bees, something more may be said. I am not a queen-breeder, but keep bees for pleasure and profit—the more profit the more pleasure to me. I have tested the blacks by the side of the Italians, and have found the Italians superior in every point mentioned by Mr. Blanken.

Last season I arranged two hives side by side for extracting; one colony was blacks, the other Italians; very nearly alike in strength when the honey harvest came, but at each extracting I got more

than double the honey from the Italians, and had to feed them less in the fall for winter stores. It would be as sensible to claim the box-hives or log-gums were superior to the frame hives as to claim that black bees are better than Italians.

As for giving the blacks more smoke when handling, my experience is that it causes them to stampede clear out of the hive, and that I do not like when I am hunting for a queen.

Most beekeepers have the Italians, and know them to be superior.

Mr. L. C. Root, in "Quinby's New Beekeeping," says that a queen can now be bought for $2 that in 1860 would have cost $20—the price Mr. Quinby paid for his first queen. If the investment paid then, it surely must now.

Cooperstown, N. Y.

PATENTS.

The following was clipped from the catalogue of Oliver Foster, Mount Vernon:

"Woe unto him that useth his neighbors service without wages, and giveth him not for his work."—JER. 22:13.

The services of the inventor are often not appreciated by those whom he most benefits. His midnight tussles with dark problems that *will not let him go* cause mental and physical exhaustion such as is unknown to other industries.

All civilized governments and reasonable individuals recognize the fact that a valuable invention, when completed, is the property of the first inventor; that he has a right to the hard-earned product of his toil, and that those who make use of his invention are under obligations to him. A patent enables him to demand payment of what they owe him; but their moral obligations are the same, whether he has a patent or not, unless he willingly gives away his invention; and every honest man is more than willing to pay for what he gets, without being compelled to do so.

I wish Bro. Root would copy the above and comment thereon. Bro. R. does not believe very much in patents, and his comments on the above would be hailed with interest by all those acquainted with his views.

POINTERS FOR BEGINNERS.

THE HIVE.

—Get the best.

—By all means try the eight-frame hives.

—If you think the Hoffman frames will suit you, try them.

—Double-wall hives are certainly superior to those having but a single wall.

—The standard Langstroth style has given good satisfaction. It has a brood-chamber 18⅛ inches long, 14⅛ inches wide and 10 inches deep. Ten frames.

—Use the best lumber in the construction of hives. It pays in the end. Good lumber unpainted will stand the weather longer than poor lumber with several coats of paint.

—Covers to hives should have roofs pitched to shed the water at the sides, or at the back end; then, when it rains or snow melts in winter, the water will not wet the alighting-board.

—Use nothing but white lead and pure linseed oil for paint. Hives so painted do not heat up even if not protected from the sun. They are always cool and comfortable during the hot days of July and August.

—Have all hives of a uniform size; then if desirable to tier up it is easily and quickly done. The brood-chambers need not be made of thick boards. Have the ends one inch thick so a rabbet can be sawed and the end of the frames protected without nailing a piece to end of hive to cover them. The brood-chamber should be made of thin boards; say ⅞ boards split.

SECTIONS.

—Use one-piece sections; they are the best by all odds and always purchase the best quality every time.

—A machine has just been invented for gluing and putting sections together as fast as a boy can pick them up.

—Keep sections in some place where they will not become too dry. If too dry they are apt to break when being put together.

—When once put up sections should be placed in the holders. This will preserve their shape and keep them clean till they can be used.

—Experience has shown that sections in which a new piece of foundation has been placed are much more acceptable to bees than those that have combs in them left over from the previous season.

—One pound sections are as small as most beekeepers care to use, yet there is a demand for smaller ones by some dealers. They call for what they term an under-weight pound. The idea is to sell 14 ounces for a full pound. Not exactly that either. A section that weighs about 14 ounces can be bought by the pound, while it is sold by the package. The purchaser has an idea that he is getting as much honey for fifteen cents, as some other dealers charge twenty cents for.

SECTION HOLDERS.

—Get the latest style.

—If possible have them just the size of the brood-chamber you are using.

— Use wood separators as they are much better than metal of any kind. Tin is too cold and slippery.

— A section holder with capacity of 24 one-pound sections is about the right size. 'Tis just the thing, however, for an 8-frame brood-chamber.

— Have all section-holders so constructed that there will be a bee space between bottom of section and top of frame. A bee space $\frac{1}{4}$ inch is full large.

—The bottoms and tops of section holders should be just alike, as it is often necessary to tier up, and tiering is not practical without continuous passage ways through the section holders.

—Reversible section holders are the things all should use. When sections are reversed bees fasten the combs to all sides of the wood, thus securing the honey firmly in the box.

—A section holder that does not preserve the sections clean and white is worthless. It is an easy matter to construct them right. Such cases save the beekeeper the trouble and time that would have to be spent in scraping and cleaning the sections.

FOUNDATION.

—Use it.

—Get the best brands.

—Try the Van Deusen flat-bottom brand. Read what J. Van Deusen says about it elsewhere in this issue.

—If you use full sheets of wired foundation in brood frames, by all means try that manufactured by Van Deusen & Sons.

—Foundation properly made and of pure beeswax if used in full sheets ought not to stretch or sag. Thin foundation is unfit for brood combs. Don't use it.

—For sections no foundation can be made too light. It requires some little experience to manufacture a good quality of foundation suitable for sections. Heavy foundation in sections spoils the quality of the best honey.

—A small V-shaped piece of foundation is about all that is needed for starters in sections. However, all do not agree with the API on this point. There is no objection to filling the sections if one can afford to use it.

— There are several machines advertised for fastening foundation in sections. As to their utility there is no question. None have ever been tested in the Bay State apiary, and we cannot speak from experience. Something of the kind is needed in a large apiary.

A QUERY.

How do you think the Punics would thrive with the weather bill of fare dished up as follows?

March 5. Rain.
" 6. Snow one foot deep.
" 7. Sunshine.
" 8. Snow nearly gone; bees flying.

March 9. Tornado from North, lasting thirty-six hours, or till nearly night on the 10th; everything frozen in fine January style.

March 11. South wind and blowing nearly as hard as when it came from the north. Boys gathering sap from soft maple trees, which by the way makes fine maple syrup and sugar. A. S. H.

REPLY:—The Punics will thrive in any climate. They are a hardy, tough race of bees. By all means try them the coming season. I hardly think the weather is worse in Nebraska than it is in Massachusetts for bees. New England has seen more winter since March came in than we had three months previous. 'Twas just the weather to kill weak colonies of bees. —ED.]

GOLDEN CARNIOLAN BEES.

EVIDENCE THAT SUCH BEES ARE QUITE COMMON IN CARNIOLA.

As Mr. Cowan considers Benton such a good authority, allow me to draw attention to a matter, where speaking of Alley's golden Carniolans on Nov. 19, 1891, page 525, *British Bee Journal*, he says: "No one in Europe, at any rate, has ever seen or heard of pure Carniolans being yellow, and to suppose that in so short a time pure Carniolans can be turned into pure golden Carniolans is a pill too large for us to swallow."

If we turn to the "B. B. J." for August 23, 1888, page 413, Mr. Frank Benton, writing from Carniola, where he was breeding and exporting these bees, says:—

"I have yet to see an apiary in Carniola where yellow-banded bees do not exist, although I have visited all the most important apiaries existing here. There is in the race a tinge of yellow blood that crops out every now and then, do the best one may." There were at my residence to day two intelligent beekeepers from the northern parts of Carniola, and I questioned them on this point, and they replied "that an occasional tendency towards orange or rusty-red bands was always the case with all Carniolans, but that it was no mark of impurity in the race, since it exists so all over Carniola." Again, in "B. B. J." for September 20, page 465, he (Benton) further says, "Be it then well understood that yellow bands existed among Carniola bees in Carniola before I ever crossed the Atlantic. There is in my mind no doubt but that this peculiarity has existed for many decades, and I venture even to say for centuries . . . Mr. Ambrozic told me personally but three days since that yellow-banded Carniolans exist in his portion of the province, and but recently a beekeeper said to me 'his father recommended yellow-banded bees as the best strain.'"

The Mr. Ambrozic quoted is a noted breeder of Carniolan queens. When this was printed in the "B. B. J.," a great controversy was going on respecting whether bees with yellow bands existed in Carniola. Mr. Cowan was the editor, and had to have his say. From the autumn of 1888 to that of 1891 is only three years, yet with these in his own journal he thinks it correct to say, "*No one in Europe, at any rate, has ever seen or heard of pure Carniolans being yellow.*" He had forgotten a very important matter that was in his knowledge only three years ago, and which he could have found on reference to the indexes. I fail to see how any persons can place any reliance on what he has said as indicated, or expect to be regarded, if they do, as other than "birds of a feather." See editorial in "B. B. J.," for February 11, 1892, page 54, in which they say under this head,

"The company men keep shows what men are." *Verbum sat sapienti.* — A HALLAMSHIRE BEEKEEPER.

I have mailed copies of the above to all papers devoted to bee culture and printed in the English language. None of them in justice to me can reasonably refuse to give it space in their columns, as every paper included in the above has more or less severely and adversely commented on my claim, so often made, that any one so disposed can produce beautiful yellow-banded bees from dark Carniolans.

The above quotation from the *Journal of Horticulture*, England, seems to completely refute the assertions of those who have so stoutly maintained that there are no yellow-banded bees in Carniola.

On the other hand, I have never claimed that yellow-banded bees *are pure Carniolans.* I have said, and do now assert *that in my opinion* the original yellow bees are the Carniolans. Everything so far published, relating to this point, seems to sustain my opinion and views of it.

Now, friends, kindly discontinue calling yellow-banded bees reared from dark Carniolans a humbug, and at the same time do not say the one who produces them is a fraud, as there is no evidence that surports your statements.

The white or silvery hairs that resemble bands on the dark carniolans, are, in my opinion, merely the result of the tinge of yellow blood inherited from generations many years back.

Some of the papers that had a hand in this cry of humbug, and contained articles of a personal and abusive nature, were no doubt imposed upon by the person who wrote them. They really supposed their correspondent knew what he was writing about and was giving only facts, instead of publicly venting his spleen against some one with whom he could not agree.

A queen reared where there are no drones is short lived, says G. W. Teft in A. B. J. Her progeny lack vigor, as well as vitality to stand the winters. The honey-gathering qualities are poor, and she also fails to keep her colony up to the standard in working bees. It is evident to me that bees that have no drones have not the necessary power to feed the queen while in the embryo state.

I cannot agree with Mr. T. on that point. While I like to have drones in all hives in which I am rearing queens, I do not think their presence is really necessary, or in any way affects the quality of the queens being reared.

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EDITORIAL NOTES.

No doubt what I say here will create a little flurry of excitement in some quarters, yet I will take the dire consequences thereof as I have in the past. I now have American golden Carniolans, why not have American golden Punics? Well, before the present season closes no doubt there will be more or less bees and queens of the last named variety in the Bay State apiary. It is a part of my trade to produce new strains of bees. I know of no way one can do more to benefit his fellow beekeeper than by producing a bee the equal, or superior of the Punic or of any of our other best strains. I hope to leave a legacy of this kind to my friends when obliged to retire from the bee business.

Yellow, or golden Punics will be found in the Bay State apiary before the season of 1892 closes and there will not be one particle of Italian blood in them any more than there is in our famous golden Carniolans. Out of several hundred Punic queens reared last year, a certain per cent of them gave workers showing more or less yellow bands. This yellow tinge is not the result of any mixture with the Italians, but a mixture of Egyptian blood which the Punics brought with them from Africa. I make this statement as it may save some people the trouble of calling me a swindler and the new strain of bees a humbug. No doubt some will say that those Punic queens that will give the yellow-banded bees must have come in contact with Italian drones. To show that this is not so, I will say that a long time after all other drones were gone, I had a good many young Punic queens fer-

tilized and the result was the same as with those fertilized when there were plenty of yellow drones in some hives several miles from the Punic yard. I do not believe that *one* of my Punic queens mated to any other than a drone of her kind, as the apiaries were not less than two miles apart at any time and there were abundance of Punic drones with the queens. I wish to say here that the country hereabouts is not *full* of yellow nor black bees. There are no bees of any race that I do not control.

It is my opinion that yellow Punics can be much easier reared than yellow Carniolans, yet there is not the least trouble in producing the latter.

If a strain of yellow-banded Punics can be produced that shall inherit all the good features and desirable points of the *ebony* Punics, there will be a variety any beekeeper may feel proud and boast of.

No pains will be spared to keep the ebony Punics in their purest state as it is possible to breed them. The attempt to produce yellow-banded Punics is an experiment, a sort of side show, as it were, to my regular business.

I want to say to those who purchase Punic queens that while I guarantee all queens shall meet *Punic* drones, I do not and will not guarantee that they will all produce typically marked bees. All must take their chances as to markings.

I found that with last year's experience that no one can guarantee the purity of these queens. The Punics will be kept so far from other races that there will not be the least danger of even one queen mismating. There is a tinge of yellow blood in the Punics that it will take time to breed out. No person in the world can, at this early date, guarantee that all his Punic queens will produce ebony workers. Now I do not wish any one to call me a swindler if I do not after this replace a Punic queen whose workers are not all an ebony color.

When these queens were sent out in the season of 1891, I did not know that it was so difficult to rear them to a true color. I really supposed that it could be done as easily as it can with the American bred Italians.

All who order Punic queens must do so in accordance with the above conditions. In order to give satisfaction, the price of Punic queens will be reduced. See prices elsewhere this issue.

The API has received circulars and catalogues from nearly all the supply dealers in America. They were not given editorial notice however, for the reason that this paper does not believe in giving one or several persons a free advertisement, and compel others to pay all the rate of 20 cents per line for the same. Such free notices are an injustice to the regular advertiser, and the API does not believe in doing business in that way.

In a letter received from Dr. G. L. Tinker, he says: "The drone-and queen trap is one of the most useful inventions in the apiary, and I believe that beekeepers are only just beginning to appreciate it. There should be thousands in use where there is one now. I think it is one of the best hivers, and I want nothing better."

Since the trap was introduced I have received a good many testimonials as to its utility, but none that illustrates its practicability, or is more to the point, than the following:

I bought the right from you to manufacture queen-and drone traps two or three years ago. I now have something over a hundred in use, and will say I had rather care for 150 swarms through the swarming season with the help of the trap, than twenty-five without it. It does away entirely with the constant watching and anxiety of the swarms running away. Without the trap, at my age I could not think of caring for more than twenty-five

swarms, as I am over sixty. I have had as many as ten swarms in the air at once; without the traps I could have done nothing; with them I got every swarm in good shape. I would say to all beekeepers who have not the trap in use, *try them* once and you will never be without them

Cazenovia, N. Y. W. W. HEATH.

On March 31 bees were carrying natural pollen in the Bay State apiary. They had been working in flour since March 14.

Several subscribers have requested that our price-list be again inserted in the API. This we cannot do for the reason that it would fill about eleven pages. However, that part of our catalogue relating to prices of queens will be found in each issue for a few months during the queen-rearing season.

Where is the White Mountain Apiarist with its 1600 subscribers? A paper with that large number of readers ought to get around oftener than once in six weeks.

Now that the API has presented sufficient evidence to convince all fair-minded people that there are and always have been yellow or golden bees in Carniola, and that I have not mixed Italians and dark Carniolans in order to produce yellow-banded bees, it will not be necessary for any one to further discuss this subject with a view to make people believe that I am a swindler. Such parties can now devote their time in a direction that might prove more profitable to themselves, if not to other people.

Those friends who so gallantly came to the aid of the API and treated the question with such fairness, have reason to be proud to know that their opinions have been so well sustained by the facts found on another page of this issue.

[From Am. Bee Journal, April 7.]

The editor's health has been so much impaired by three annual attacks of La Grippe that if some radical improvement is not made very soon, a collapse is imminent. His physician prescribes "a complete rest and change of air." Accordingly he will leave the city next week for a month's rest. The drudgery of desk work has brought on neuralgia and brain troubles. A vigorous constitution, and strong will-power have contributed in no small degree to his holding out so long against the insidious working of that dire disease, and its results.

Meanwhile the editorial work on the *Bee Journal* will devolve upon the Editor's assistant, Mr. George W. York, who has been connected with the office for several years, and is thoroughly conversant with the duties of that department.

The plans of those beekeepers who expected to rear large bees by cross mating the smaller races with the *Apis dorsata*, are upset, as it is understood that the queens of this "coming bee" mate with their drones in the evening. Probably they select fine moonlight nights for the wedding tour. Beekeepers will believe that mating story perhaps when they know more about the *Apis dorsata*.

How very good the great nation of the United States is to its own people; for instance, to those citizens who rear queen bees. This great government will let us mail queens to any country except to the places we desire to ship them. Most any sort of merchandise can be sent by mail to us, but we cannot mail even a drone-trap to England.

It is amusing to read what some people predict of the weather, honey prospects, etc. Sam Wilson, of Crosby, Tenn., predicts, or rather makes a "forecast" of what the honey crop is likely to be in Iowa the coming season. "It will be good in some places and not so good in others." Well, the API makes the same predictions for each year and for just 1000 years in advance.

The only thing that will interfere with the verification of this prediction is the

"forecast" by Prof. Totten, of Yale College, made in Boston, Sunday, March 20, that the world would come to an end this year, and that the day of judgment would begin on March 29. I really wish this great event might be delayed till fall, as I have made calculations on rearing and shipping a good many Punic, American Golden Carniolan and Italian queen bees the coming season. Well, I have lots of orders for these queens, and my friends can rely on having them filled unless something equally as serious as the ending of the world strikes the Bay State apiary.

While in Boston a short time ago a dealer in honey was interviewed. The API was informed that there was little or no call for honey. This dealer had a large quantity in stock. It is a fine lot and was shipped by Vermont beekeepers.

Another "better-than-all" self hiver has been invented by an enterprising beekeeper. It is one of those new-fangled contrivances that is warranted to do wonderfully effective work before being tested.

This invention is by Bro. Pratt. He proposes to place an empty hive directly in front of a full colony, and thus compel the bees to pass the entire length of the new hive to reach their combs. This alone will condemn the practicability of the arrangement. Then after the bees enter the new hive they must find their way down through some perforated metal, and this after being obliged to do the same thing at the entrance of the first hive.

Now, if any one really desires to use a self-hiver in that way, that is, by placing the empty hive in front of the colony, I can tell them of a much simpler plan, and it will do its work equally as well as the Pratt arrangement. It is this: Arrange the empty hive in front of the colony, and then place one of my drone-and-queen traps at the entrance of the new hive, leaving out of the trap the little nail that prevents the queen from returning to the hive, as per directions sent with the traps.

The hiver described in the April issue of the API *has* hived a good many swarms and works perfectly, and is practical in every respect.

I have sent a number of the swarmers to Texas, and expect reports from them soon.

As the latter swarmer is now arranged it will catch every queen that issues with a swarm; she is then conducted to the new home, and the bees join her on their return to the hive. Now if there are not bees enough to form as large a colony as is desired, the parent hive should be removed some ten feet away. No one should object to this, as the old or new colony should have a new location, and it will be much better to give the old hive the new stand. In this way the swarm would be well stocked with abundance of workers without in the least damaging the old stock.

I WILL EXCHANGE QUEENS OR SUPPLIES FOR BEES.

If any reader cares to send us bees for queens, drone-traps, self-hivers, advertising space in API or for subscription to the APICULTURIST, we are ready for the exchange. Black, hybrids or pure Italian bees in frame or box-hives will answer our purpose. Strong colonies in a healthy condition, well packed, are all we demand. If shipped in box-hives, the hive should be inverted and the bottom covered with wire-cloth, and shipped in that way.

Seven frames in light shipping-boxes, with about half the top covered with wire cloth will do. If the combs are not wired, a piece of wood should be placed crosswise the hive at the bottom for the frames to rest on. If the combs do not reach the bottom-bar, the space should be filled with a piece of wood ¼ of an inch thick. Thus packed, the combs cannot break down.

When ready to deliver to express dash a pint of water on the combs and bees. I will pay $3 per colony, if the distance from Wenham is not over 500 miles. The bees must be shipped before May 15, as the weather is likely to be too warm after that date to send bees safely. *Ship by American Express.*

HENRY ALLEY, Wenham, Mass.

THE AMERICAN

APICULTURIST.

A Journal Devoted to Practical Beekeeping.

SUPPLEMENT.

VOL. X. MAY 1892. No. 5.

THE DRONE-AND-QUEEN TRAP SELF-HIVER.

There is always something new under the sun. The readers of the API are presented with an illustration of the drone-and-queen trap self-hiver. This is a new use for the trap, but that it will do its work in hiving bees as well as catching queen and drones, there is not a shadow of a doubt.

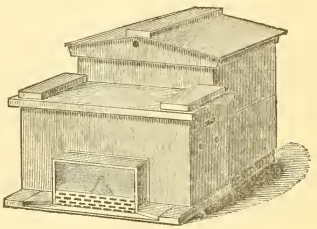
By examining the illustration it will be seen that the decoy or new hive is placed directly in front of the hive that the colony occupies; but the frames in the former run crosswise the entrance of the latter and the bees are not compelled to travel the entire length of the hive as they must when arranged as are some other swarmers.

The only extra trouble to arrange a self-hiver as here described is in adjusting the bottom board to connect the two hives. I need not here describe the manner of doing it as most any one has sufficient ingenuity to do a small job of this kind, and then the one used on the Bay State hive could not be used on other hives.

This trap-swarmer arrangement can be attached to any style hive in use with little or no extra expense.

In order to have the trap work successfully as a self-hiver, there must be a piece of perforated metal inside the trap having apertures large enough to let a queen through, but too small to let a drone pass. To those who have the traps and wish to test them as a self-hiver, I will mail the metal of the exact size on receipt of ten cents.

This hiver can be used with perfect safety in any out-apiary even if the person in care does not visit the yard but once in two weeks. Our self-hivers are the only arrangement used for such a purpose that are reliable and safe to use in an out-apiary, as all others have no device for catching and retaining the drones away from the entrance, thus



THE DRONE TRAP SELF-HIVER.

removing all danger of the bees smothering on account of the drones clogging the entrance. Without a provision for catching drones no self-hiver is of the least utility or practicability nor reliable unless the apiarist is present to look after it, *especially on hot days*.

Now, friends, while I feel sure this swarmer will catch every swarm that issues, yet I do not consider it quite as practical and convenient as the one described in the April issue of the API.

If any reader of this paper can see any reason why the drone-trap swarmer will not work successfully, or can dis-

cover any defects in its arrangements, the API will gladly find space for the criticisms of all. Come, Dr. Miller, criticise this arrangement all you wish, and I especially invite you to do so.

I will say here that there should be a clean brood comb in the decoy hive, as the bees and queen will be more likely to stay in the new hive when a swarm issues, and the queen will feel more at home than she would in the bare walls of an empty hive. The comb should be placed next the front side of the decoy hive.

Something about the Queens sold at the Bay State Apiary.

ITALIAN QUEENS.

This strain of bees are direct descendants of our famous One-hundred-dollar queen.

There are several daughters of this queen in our apiary that are equal in all respects to the original queen.

The workers from this strain are industrious, handsomely marked and possess mild dispositions. They will please any one who prefers the Italians to other races.

THE AMERICAN GOLDEN CARNIOLANS.

This strain of yellow bees were produced by selection and careful breeding from the dark Carniolan race, and were originated in the Bay State Apiary during the years 1890–1891. There is no Italian blood or mixture of any yellow race of bees in them so far as I am aware. What the golden color is I will not pretend to say; that it came with the dark Carniolan bees from their native country I do assert.

These bees are beautiful to look at; workers active, queens very prolific and bees very gentle. Can be handled in most cases without smoke, bee-veil or gloves. I guarantee that they will give satisfaction in any apiary.

PUNICS.

This is an ebony race. They came from North Africa and give more promise of being the "coming bee" than any race or strain yet imported. Every feature, movement and characteristic of these bees is in marked contrast to all other races. They are more active either on the wing or combs; fly more swiftly and gather honey from flowers that our native or yellow bees do not visit. Too much cannot be said in favor of this newly imported race of bees. I am speaking from experience regarding the Punics, and not quoting the opinions of any person.

As the *Apiculturist* will give an extended description of these bees early in the spring, I need not do so here. One thing can be mentioned. Some wonderful and mysterious things will be related of the ebony bees. There is no mistake about this race being the most interesting and wonderful insect known to mankind.

The queens are exceedingly prolific, some colonies containing 100,000 bees. Those who introduce them will be wonderstruck at the number of bees one Punic queen will produce in the course of a few weeks.

Prices of Queens.

Italian queens, reared from daughters selected from our famous one hundred dollar queen, will be mailed at the following prices:

One warranted queen,	$1.00
" select "	1 25
" tested "	1 50
" select tested "	3.00

The $3.00 queens are thoroughly tested for queen mothers, and in fact are as fine in all respects as it is possible to produce.

All my queens are selected, that is, a large number of virgin queens are reared, and the best are selected from the best and introduced to become fertile. No queens inferior in size or in other points are permitted to become fertile.

American Golden Carniolans.

Warranted, each	$2.00
Tested, "	3.00
Select tested,	5.00

Punic Queens.

One untested,	$2.00
" selected,	3.00
" " tested,	5.00

Safe arrival and sure introduction of queens guaranteed when introduced by the directions mailed with each queen.

A discount of 20% allowed on all orders for more than one queen.

BAD FOR SOME DEALERS.

MR. ALLEY—Enclosed find cash for one Italian queen, and one Golden Carniolan queen. We bought seven queens and the one we had from your apiary is the only one we can rear fine queens from.

Dupont, Ga. DUNCAN & CONRAD.

MUTH'S HONEY EXTRACTOR
PERFECTION
Cold-Blast Smokers,
Square Glass Honey Jars, etc.

For circulars apply to CHAS. F. MUTH & SON, cor. Freeman and Central aves., Cincinnati, O. Send 10c. for Practical Hints to Bee-Keepers.

Mention the American API.

IT PAYS

to order the best made goods. For fine Sections, Foundation, Perforated Zinc, Queen Excluders, and the best Hive for Comb Honey now before the public, order of DR. TINKER.

PRICES GREATLY REDUCED.

Address for catalogue,

DR G. L. TINKER,

NEW PHILADELPHIA, Ohio.

BEES FOR SALE

Three hives of bees for sale. For particulars address

L. H. LINDERMUTH,

LEMASTERS, Franklin Co., Pa.

ADVERTISEMENTS.

I have prepared an illustrated circular which will be mailed free to all who desire my Italian, golden Carniolan and Punic queens. Punic queens reared from imported mothers only. Prices of hives, smokers, drone-traps, automatic swarmers, foundation, and in fact of all necessary articles used in the apiary given in my list.—HENRY E. ALLEY, *Wenham, Mass.*

SAY! YOU ☞ **BEE-KEEPER!**

Send for a free sample copy of **ROOT'S** handsomely illustrated, Semi-Monthly, 36-page, **GLEANINGS IN BEE-CULTURE**, ($1.00 a year) and his 52-page illustrated catalogue of

BEE-KEEPERS' SUPPLIES

☞ **FREE** for your name and address on a postal. His **A B C of BEE-CULTURE**, 400 double-column pages, price $1.25, is just the book for YOU. Address

A. I. ROOT, THE BEE-MAN, Medina, Ohio.

HALF A MILLION SECTIONS.

Bees, Hives, Queens, Comb Foundation, Smokers, etc., etc. Must be sold. Send for price list to **E T. FLANAGAN, Box 783, Belleville, Saint Clair County, Illinois.**

Mention this paper.

Send 50 Cts. For my Book, entitled—'A Year Among the Bees,"—114 pages, cloth bound. Address

DR. C. C. MILLER,
MARENGO, ILL.

PLYMOUTH ROCK FOWLS.

Pure barred Plymouth Rock Cockrels, $1.25 to $3.00 each. Eggs from stock that will produce Prize Winners, $1.25 per dozen.

L. C. AXTELL,
ROSEVILLE, ILL.

A FREE TICKET TO THE

WORLD'S FAIR

would surprise every Beekeeper; so will our Catalogue of Apiarian Supplies, for it contains many things to be found in no other.

QUEENS, BEES, HIVES,

best quality, best queens, best bees,—in fact the *best* kind of supplies.

☞ Send for *Free* Catalogue to-day.

R. STRATTON & SON,

Mention API. HAZARDVILLE, CONN.

YOU WANT

COMB FOUNDATION,

WE are headquarters for IT. Write for special discount; our prices cannot be equalled. We furnish EVERYTHING used in the apiary.

A CHAFF HIVE

two stories, including 9 frames and two section cases, nailed for $1.95.

Circular on application.

I. J. STRINGHAM,
92 BARCLAY ST., New York.

LOOK! LOOK!

I manufacture the MODEL BEE-HIVE, FRAMES, SECTIONS, SMOKERS, HONEY CANS, SHIPPING CASES, BEE VEILS, etc., etc. Also breeder of ITALIAN QUEENS.

☞ Send for price list.

Address
W. R. STIRLING,
Box 9. ROND EAU, Ont.

PRATT BEE FARM.

I wish to call attention to the PUNIC BEES for your trial the coming season. All Queens will be bred from the original Punic stock imported by me in 1891. All Queens guaranteed first class, and introduction sure when directions are followed. Warranted Punic Queens, $3.00 each; two at the same time, $5.00. Virgin Punic Queens $1.00 each; $5.00 per 1-2 dozen. Introduction guaranteed.

SWARMERS, SMOKERS, FEEDERS, TRAPS, BEE-HIVES, etc., constantly in stock.

Illustrated catalogue free. Send 10 cents in stamps for my book on Nuclei Management.

E. L. PRATT,
Beverly, Mass.

1872 Keystone Apiary 1892

ITALIAN QUEENS AND BEES.

Select, June,	$3.50,	July to Oct.,	$3.00
Tested, "	2.50,	" "	2.00
Fertile, "	1.50,	" "	1.00
6 Fertile, one order,	8.00,	" "	5.00

Send for circular. No Supplies.

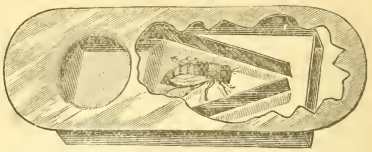
W. J. ROW, Greensburg, Pa.

BEE-KEEPERS, LOOK HERE!

WILL FURNISH YOU the coming season, No. 1 White Basswood, 4 1-4x4 1-4, one-piece V-Groove Sections, at $2.50 per 1,000; second quality, $1.50 per 1,000. White Basswood, 16-lb. Shipping Cases, in flat, $7 per 100. All our goods warranted. Special prices to dealers. Our Sections are in use in nearly every State in the Union.

WAUZEKA MFG. CO., Wauzeka, Wis.

PORTER'S SPRING BEE-ESCAPE.



Saves temper, time and bees. Prof. Cook says: "No bee keeper can afford to be without them." Wm. McEvoy, Foul Brood Inspector, Ont., Can.: "They should be used in every bee yard in the whole wide world." Thos. Pierce, Pres. Eastern N. Y. Bee Keeper's Asso'n: "The time will soon come when every beekeeper will use them." Send for testimonials and read what others say of them.

PRICES—Each, by mail postpaid, with full directions, 20 cents. Per dozen, $2.25.

If after three months' trial they are not found superior to all other escapes and satisfactory in every way, return them and we will refund your money. For sale by dealers.

In responding to this advertisement mention API. **R. & E. C. PORTER, Lewistown, Ill.**

Our New Club and Premium List.

We club the AMERICAN APICULTURIST with any of the papers below named. The regular price of both is given in the first column.

The American Apiculturist,	$0 75	
With Gleanings in Bee Culture,	1.75	1.50
" American Bee Keeper,	1.25	1.15
" American Bee Journal,	1.75	1.65
" The Apiculturist and one sample Drone-and-queen trap, by mail,	1.40	1.00
With sample Swarmer,	1.75	1.25
" Thirty Years Among the Bees and Beekeepers' Directory,	1.75	1.00
API and Italian Queen,	2.25	1.50
" " Golden Carniolan,	2.75	2.00
" " Punic Queen,	3.75	2.75

New subscriptions to APICULTURIST will begin with any number.

Money for queens need not be sent till the queens are wanted.

Five copies of API one year, $2.50.

Remit by money order on Salem, Mass., P. O., or by check.

Our new illustrated Price-list and Circular now ready to mail. Sample copies of API mailed free.

Address Henry Alley, Wenham, Mass.

RUBBER PRINTING STAMPS.

Best nickel plated self-inking stamp, with ink, pad, and one or more lines of letters, 50 cents. Has letter plate 3-4x2 inches. No. 4 has letter plate 1 1-2 x 2 1-2 inches, large enough for your business card or envelopes, letters, labels, sections, etc., $1.50.

50-page catalogue of rubber type stamps, etc., for a two cent stamp.

MODEL STAMP WORKS,
Shenandoah, Iowa.

THE LONE STAR APIARY

sells queens and bees at the following low prices: Untested Queens before June 1st at $1.00, or $10 per dozen; after June 1st, 75 cts. each or $8 per dozen. Tested Queens before June 1st, $1.50 or $15 per doz.; after June 1st, $1 each or $10 per doz. Three frame nuclei and Untested Queen, $2.00. Two frame nuclei and Untested Queen, $1.50. Full colonies, $6 before June 1st; after $5, (in Langstroth hives.) My bees are bred from the best blood procurable in this country, 3 and 5 banded Italians. If Queens from imported mothers are wanted it must be stated in the order, otherwise American-bred stock will be sent.

OTTO J. E. URBAN, Proprietor,
Thorndale, Texas.

EVERY BEE-KEEPER

should send to the largest and best equipped bee-hive factory in Massachusetts for free PRICE LIST, which will explain

SOMETHING NEW IN THE SUPPLY LINE,

that all beekeepers will want.

We make the best **DOVE-TAILED HIVES,** best **COMB FOUNDATION,** best **SECTION BOXES,** and the best line of BEE SUPPLIES of any one in Massachusetts, and sell them the lowest. Address,

DUDLEY BOX CO.

or F. M. TAINTOR, Manager. GREENFIELD, Mass.

THE AMERICAN APICULTURIST.

A Journal Devoted to Practical Beekeeping.

VOL. X. JUNE 1892. No. 6.

RACES OF BEES.

It is really more difficult to be practical than it is to be learned and precise, hence it does not surprise me that some persons of late have wasted ink in their attempt to enlighten their brethren on the subject of "races of bees." It is generally conceded that all honey bees, *Apis mellifica*, most likely had their origin in one common parentage. But this does not settle the question of races. Now, I say it is most probable that at a very early period in the history of the world the race of honey bees was divided by some cause, no more mysterious than many other things we see in nature, into two distinct races, black and yellow. The intermediate colors so common in varieties of bees indicate this, besides we see the same thing in the wasps and ants. I believe, and I think my belief is based on substantial reasoning and observations, that there are two distinct races of bees, from which all the intermediate strains or types of bees had their origin, and this accounts for the tendency of the different types of bees to sport in breeding. It is the most reasonable thing in the world that the striped types of bees should sport most in their breeding, because everything pertaining to their history goes to show that they are a more recent type than the more solid colored types are. Many persons contend that the Carniolan bees belong to the dark or black race of bees. Of course this is a mistake, brought about by the common weakness of "jumping at a conclusion," rather than by the slow process of careful investigation. The Carniolan bee does not belong to the "black race" of bees. They are an intermediate type of bees with a strong tendency to the yellow. I have never seen a colony of Carniolans become darker by breeding them promiscuously. In my experience of three years with the Carniolans their tendency has been toward the yellow type. If anybody doubts this let him introduce some Carniolan queens into his apiary of pure German bees, and he will find the outcropping of yellow blood sooner or later.

The difference between the Carniolan and the German types of bees is as *marked* to the practical observer as is the difference between the Italians and the Germans; not merely as a matter of color, but in general make-up as a distinct type of bees. I have believed for some years past that the old so-called German type of bees is much older in its formulation as a type of bees, than any of the striped or banded varieties. This I judge from the fact that they sport in breeding less than any of the banded varieties.

In my experience with the Carniolan variety I have found that they *sport* in breeding to a remarkable degree, and this has led me to believe that they are a recently formulated type of bees.

The Punic or Tunisian race of bees has not been under the observation of persons competent to judge, long enough to pass on their qualities.

Christiansburg, Ky. G. W. DEMAREE.

CELLAR WINTERING.

I usually bring the bees out of the cellar at this date, April 12, or a few days later, but if a decided change for the better does not take place soon, they will have to remain where they are for a week or two longer.

I put 52 colonies in the cellar Nov. 17, under our living-room, and they are and have been ever since as quiet as when they were placed there, and not once have they been disturbed in any manner—the best possible condition for wintering safely.

I have concluded that nothing is gained—a positive injury to examine bees frequently—to go into their room with a lamp, or allow a ray of light to penetrate their apartment during confinement under ground. Should they become restless, it is not to their advantage to investigate the cause thereof under the glare of a strong light; the cellar is no doubt too warm.

Should they lack stores, the cellar (as a rule) is too small to admit of free circulation among the hives, if your circumference nearly equals your height as in my case. You should have provided for necessities six months before.

I believe the secret of successful wintering is very simple.

Provide plenty of food in October, if lacking. Place a warm covering of burlap or other porous material over the brood frames before cold weather sets in, although this is not always a saving ordinance every season, for I have wintered bees in good shape without any covering, whatever, but still I think it best to "tuck them up warm," in order that they may be left much longer out of doors—as late as Nov. 17, in this latitude (weather permitting of course).

Carry them *carefully* into the cellar at night, or when too cold for them to fly with safety.

I have not found it necessary to raise the cover for ventilation, or remove the bottom board as recommended by many beekeepers.

I now think I made a serious mistake formerly in putting my bees in the cellar too early in the season, as the heat seemed to make them restless, "roar loudly," and crawl out of the hives. I have yet to hear them make a "roaring sound" in cold weather; overheating will.

I believe it is detrimental to ordinarily strong colonies to open the outside cellar door before you are ready to carry them out, unless they are badly diseased; for I have noticed that after they once "taste" or smell the fresh spring air laden with the aroma of spring flowers, they can no longer be kept within bounds. Such days usually come before it is safe to remove them from winter quarters.

I am anxiously waiting for a report of your bee-house; the benefits to be derived by its use; its superiority over a cave or cellar; whether or not bees can be wintered therein better and with less loss than in a cellar; cost of heating, and a thousand and one other questions pertaining to the same.

I pay but fifty cents for help to store away my bees in the fall, and the same amount to take them out again.

If I can devise or be taught a better plan than I have adopted, I am willing to be enlightened, or if there is a more successful method in vogue than mine, I am willing to adopt that also.

Yours for success and better methods in apiculture,

Madison, Neb. A. C. TYRREL.

FACTS CONCERNING EXTRACTED HONEY.

As the circulars and text-books do not seem to present the whole truth in regard to extracted honey, I thought that what your humble servant has observed along this line might not come amiss.

The Dadants say in their circular: "Honey should not be extracted when first harvested as it is watery, unripe and will sour."

Many others say: Honey should never be extracted until it is capped.

Professor Cook in his manual says: "As there is danger of imperfect ripen-

ing it is wisest to leave it in the combs till the bees commence capping it."

Honey may sour if thrown from the combs when it is just gathered, and it may be wisest to leave in the combs till the bees commence capping it, or until it is solidly capped over, but my little experience does not prove nor tend to prove that either proposition need be adhered to.

Some extract the honey while thin and evaporate by sun heat in a long tank lined with tin covered with glass; others use nothing of the kind but simply run the honey thick and thin into a cylindrical tank holding from six to ten gallons and placed in the sun with light cloth tied over top.

A tank three to five feet in diameter and six to seven feet high seems to be the favorite style.

I am free to say that honey *thick* and *thin* (as we are pretty sure to find it in a whole day's work) can be ripened perfectly by use of the tank only.

Properly arranged the tank should set lower than honey house so that honey can run directly into it from the extractor, by the time the tank is filled the honey near the bottom will usually be ready for storing away or ripening; then, unless other storage is available we must draw off a sufficient amount to give room for the next run, and so on. In a region where showers are liable to fall the tank must be covered by some kind of roof.

In practice enough more honey can be secured in one season by using tank or some other ripening apparatus to pay its cost many times over.

Galvanized iron is a good material and is much used for both tanks and extractors.

Very large tanks should have an iron hoop around the middle as well as top to add strength.

I have not written the above to criticise such able authorities as has been quoted, but because it seemed to me the subject should be treated more fully, or if you please more added.

Dewey, Kans. M. J. WILSEY.

FEEDING.

"How long will a swarm of bees live on what honey they carry with them from the parent hive when they swarm? If they are hived on foundation starters and the weather turns cold and rainy so they cannot work in the fields for perhaps a week, what will become of them?"

These are questions that have been asked me, but like Dr. Miller I can only answer, "I don't know," as I have never tried it, as, for some reason or other, I could never bring myself to starving anything to see how long it could live without being fed.

If the weather is cold and wet so the bees cannot work, unless they have an abundance of honey, I am forced to feed them, the same as I would any other creature that I knew was hungry, or—well, I can't be comfortable myself.

Does it pay? Some of the wise ones think it does not pay to feed artificial pollen in the spring or sugar syrup to encourage brood rearing. Perhaps it does not sometimes and in some places. I can only answer for myself and tell my experience this spring; whether it pays or not I cannot tell till next fall.

We have had the worst weather for bees this year up to the present time imaginable; weeks at a time of cold, cloudy, wet, windy weather, with only how and then a warm, sunny afternoon when the bees could fly and go to the fields.

My bees were wintered on eight frames; had plenty of fall honey for stores, and came through the winter in good condition. March 25th they carried the first pollen. About April 5th I first placed artificial pollen (corn meal and flour mixed) in the yard where they could get it. Just as soon as the sun would come out, even when the wind was blowing hard from the north, making it too cold for them to fly far from the hive, they were at work carrying it in. Before April 20th the strongest colonies needed more room, and in spite of the bad weather the ten-frame hives are hardly large enough to accommodate some of them now. About April 15th I commenced feeding them a little

warm sugar syrup at night, in the hive, whenever the weather is so bad that I think they need it.

One day a visitor, who had been walking through the yard, said, "You have one *very* strong swarm out there." I thought I knew which one he meant, but to make sure asked him "which one?" He replied, "The one in the north end of the shed; they will come out and bid you good bye some fine morning, if you don't look out." "Oh, yes; that is my Alley queen (the one that paid for herself and hive last fall), but I don't think I will lose them if they should swarm," and I showed him the trap and explained how it worked.

This queen had sealed drone brood April 9th, and if you would like to know what I think she is worth just come around and try to buy her.

I was asked to look at the bees of a neighbor a few days ago, about April 25th. The first hive we examined we needed no smoker, as the poor little remnant of what was last year a fine colony were too weak and spiritless to fly, having evidently been queenless all winter. The next hive had a little brood in the centre frame and lots of dead bees on the outside frames. We could not make a very thorough examination, as the smoker was broken and would not work, so "we took it for granted that there was honey in the other side of the hive," and went on.

Other hives with honey boards next the frames could not be examined, for getting them loose "made the bees so mad we could not handle them without a smoker," so "we took it for granted that they must be all right, too."

These bees are fine Italians, in good hives, and their owner "hopes for a big crop of honey this year."

He does not feed them or read any beepaper; "hasn't time."

Perhaps he will get the crop; I hope he will, and while he is "hoping" I shall try and get my bees ready to gather the crop, even if I do have to spend a little time and sugar syrup to do it.

Millard, Neb. MRS. A. L. HALLENBECK.

HOW A VERMONT BEEKEEPER WINTERED HIS BEES.

On receiving the December number of the API I felt as if I was invited to an office I was very poorly qualified to fill, and have not changed my mind any since. When I consider the writings of scientific men, men who have had long experience in beekeeping, how can one only two years old expect to be able to compete. I shall not attempt, but the country is full of beginners who, like myself, might be able to tell something. However, I shall not try to do much more than to make a little report and ask a few questions.

Of course I am older in years than I am in beekeeping, so the years that have passed in reading bee books and papers and in irregular work among the bees, are not counted.

In the fall of 1890 I bought, or rather owned, twelve swarms of bees, in destitute condition for winter, which came through in the spring of 1891, ten dead and two barely alive. Those two built up rapidly and nearly filled three tiers of one pound sections last summer (one tier is thirty-two sections; three tiers are ninety-six). I don't claim much credit for my part of the work, for it was a good honey season and the bees would do well in spite of me.

However, as soon as the weather was warm I spread the brood enough to insert two empty combs in the middle of the brood nest at two different times, and then, at the first appearance of white clover, put on one tier (thirty-two one-pound boxes). When those showed capped honey pretty freely I put another tier under the first, and so on till the third was on. I apprehend the added room was given them at about the right time to give the bees and queen plenty of space to fill, and cooled off the desire to swarm. "Ain't dot so?" Mr. Editor.

Then again, in the spring of 1891, I bought three swarms of bees, which increased by natural swarming to ten colonies, but one small swarm, not having enough honey to last until they could

gather more, departed for the woods, so I had nine good swarms from those three, which, with the other two, left eleven good swarms last fall, and eleven good swarms this spring.

I can tell you what occasioned my loss in the winter of 1890–91, but I won't do it in this letter. The fact is I am a little ashamed of it, but I consider the lessons learned by that loss worth more than the bees would be, alive. Experience teaches a dear school, but a certain class can learn in no other.

During the past warm days I've given my bees a dose of candy, made *a la* Alley.

You have heard of the darkey who was accused of stealing chickens, and when brought before the justice his lawyer proved that he didn't steal "dem" chickens, but when he came to hear the other lawyer talk, the darkey says, "By golly, I guess I did steal dem chickens." So, when I read that upward ventilation, *i. e.*, cloth, and cushions made of chaff, let the warmth of the bees escape and destroy them, I was afraid my bees would all be dead in the spring, but when I came to find them all alive and kicking this spring, "by golly" I guess I did save "dem" bees with cotton cloth, and chaff cushions made of bran sack cloth, filled with oat chaff six inches thick and two feet square, or just the size of the outside case of the hive.

Now, in closing, let me introduce you to Captain Graham, of Ludlow, a veteran beekeeper ninety-two years old, and spry as a man of seventy-five.

Ludlow, Vt. A. P. FLETCHER.

LETTER FROM A BEGINNER.

Having read in your paper that you solicited articles from your subscribers telling what they and their neighbors are doing with bees, I thought I would write you a short account of what we are doing in this locality. I am only a beginner, as I am but eighteen years of age, but am greatly interested in beekeeping. '91 was a poor season for bees in this locality. I began in the spring with two colonies of black bees in box-hives, and now have five colonies of Italian bees in dovetail hives, four of which swarms are from a queen obtained from you. Queens are large and very prolific.

This is a good place for bees, and the majority of farmers, in this locality, own one or more swarms, nearly all of which are black bees in box-hives. I think the time is coming and will soon be here, when a great deal more attention will be paid to bees by the people of this neighborhood. The interest in them seems to be increasing, and many show a strong desire to learn more about the busy little workers and the care which they should receive.

Your API contains much which is very interesting to me. If this reaches the "API," I may write again.

Fillmore, Ohio. JOSEPH PLACE.

HOW I HIVED MY FIRST SWARM.

I will tell you my experience in hiving my first swarm of bees.

A neighbor gave me a swarm and helped me hive them (or did it himself, rather) in a pine box which I furnished. It was seven years ago in South Missouri, where they all use the old gum. I had moved there the year before from the North, and, although I had never handled bees, I had seen it done on scientific principles, and I thought I could revolutionize the bee business in that section by having frame hives and doing things on the latest improved plan, and so when my friend of the bee gum offered to give me a colony, I sent at once and bought Mr. Newman's book, "Bees and Honey," and subscribed for the "*American Bee Journal*." My swarm at last came out and I was notified and carried my box over, and my friend got them in all right, and that night I carried them home. The next day they concluded they did not like that box and so came out, and the air was full of bees, but they finally settled back on the outside and would not go in. They remained on the outside all

night, and the next day I got another box ready and sent for my friend to come and see me hive them, for I thought if I am going into the business I must learn to do everything. I put a lot of mosquito bar around my hat and let it hang down to my waist, and drew over my hands a pair of socks. Then with the new box on a table and all things ready, and my friend close by to give orders (though he had no protection whatever), I gently picked up the box and carried it to the table. Holding it over the table I gave it a downward motion and a sudden stop, which brought the bees in a nice pile on the table, in front of the new box. All right so far; but here came a terrible mishap—the socks so impeded my grasp on the box that it slipped and fell on the pile of bees, and of course this set them in a rage (those that were not killed), so my friend had to vacate, but I stood my ground and with a stick gently started them into the new hive, but I discovered to my dismay that my mosquito netting did not protect, for the bees by hundreds were lighting on me and crawling up under it, and in a minute they were all over my face; but they had not stung me yet, so I would not disgrace myself by running away, but suddenly one enterprising bee undertook to force an entrance into my ear. This was more than human nature could stand, and I gave him a swipe that pulverized him and made tracks for the woods.—NOVICE.

WORKING FOR COMB AND EXTRACTED HONEY.

COMB HONEY.

However great may be the demands for extracted honey, and whatever favor it may gain among our apiarists, comb honey will always be in demand, commanding a price far above that of extracted honey. The beautiful comb-honey in one-pound sections will always attract buyers and command the highest price.

To secure a large crop of honey we must have our colonies strong in numbers by the time the honey harvest begins. The brood combs should be filled with brood and the hive overflowing with bees. To get them in this condition we should begin feeding a little daily about the time the first pollen comes in, or if they have plenty of sealed stores we can accomplish the same result by uncapping some honey every few days. You will next want to know how to get the honey. The first thing will be to have good strong colonies of bees; to get this, brood rearing in the spring should not be allowed to meet with any drawback for want of stores or feed.

TO GET THE BEES STARTED IN THE SECTIONS.

Having your sections all ready before the honey flow begins, with good straight structure of comb foundation fastened into them, which is very quickly done with a Parker foundation fastener or any of the section presses now in use, or if you have no such machine you can do very good work with a common table knife. Lay the edge of the strip of foundation in the middle of the top part of the section. You can then with the point of a stiff knife press the edge of the comb so firmly against the wood that the wax will adhere. To do this, however, you must choose a warm day, for if it is too cool the wax will not work. To get the bees started to work it is best to put in some sections with some comb in them, if we have any unfinished sections left over from the previous season, which all beekeepers do have; these are very enticing to the bees and will not fail to start them at work, especially if the honey flow is good and the bees are strong in numbers. Success to the American Apiculturist is my best wishes.

Sang Run, Garret Co., Md.

M. H. DE WITT.

I can now furnish warranted Punic queens that will be purely mated.

H. ALLEY.

THE HOME LOT.

KEEPING BEES AND RAISING SMALL FRUITS.

Every happy home is greatly dependent upon its surroundings. The lot of good soil, containing thirty or forty square rods, besides a snug, neat house and a small stable, should have a small patch for vegetables, several apple and pear trees in the corners, a few grape vines in the sun, six or eight currant bushes by the fence, a cluster of raspberry bushes in the shade, and on the sunny side a "Sweet Home" for the bees. Such a possession, unencumbered, should be the ambition of our young men; and when properly enjoyed, it will be made profitable, beautiful and a source of untold pleasure.

The ideal, enlarged or diminished, may be realized in the city, in the village, or on the farm.

After the lot and buildings are secured and made cosy, a small outlay and a little care each day will insure all the rest.

FRUIT TREES.

All trees around this home, except a few evergreens on the north side, should be both ornamental and fruit bearing. If only one apple tree can be afforded, that should be the Rolfe which, with ample space and good culture, will fill the bill for all purposes, from September to January.

A few years ago in Piscataquis county, where this apple originated, I knew a farmer who chanced to have a fine large tree of this variety standing near his barn. It was an annual bearer, and it was the admiration of all beholders when loaded with fruit. Its crop, always quick in the market and commanding the highest price, not only supplied the small family with the richest dessert, but a few selected barrels were annually set aside to pay the farmer's taxes. If two trees can be afforded on the home lot, the second should be the Rhode Island Greening which, with the Northern Spy, is among the richest winter apples we have. To these, if you can add one more for early fruit, the Red Astrachan is very desirable.

The first pear tree for the Maine home lot should be the Clapp's Favorite, and the second should be the Sheldon—one early, and the other later. To secure such fruit as we desire, will frequently require

GRAFTING.

Every owner of trees should know now how to graft. It will take only fifteen minutes to learn this art, and then it will be such a pleasure and profit for every man and every boy to do their own work. Cut your scions at any time from November to March, keeping them in green sawdust until used. Make your wax of one part beef tallow, two parts beeswax and four parts rosin. Take some old half-worn cotton cloth, dipped in melted beeswax, for strips half an inch wide to wind and carefully cover the whole head after the scion is set and waxed. Graft in May.

GRAPE VINES.

The earliest and best grape vine I have ever known is the Haverhill, which is a modern seedling raised in Haverhill, Mass., and sold in that city at $3 each for small vines. It resembles the Delaware in color and quality, but is larger and much earlier. Next to this variety, I should select the Brighton for dessert, and then the Concord for other purposes.

RASPBERRY BUSHES

will bear every year; will do well in the shade, and will flourish without care. The same is true of some kinds of blackberries. Currants require care.

THE BEES.

On the sunny side of the lot—except at high noon in a hot day—the bees should have the full blaze of the sun; provided the hive is protected by a cap, that will keep off intense heat and rain. The hive, of approved and modern construction, should be painted some light

color, and filled with the most vigorous Italians. It will require some reading and close attention at first, to run the colony successfully, but in due time it will pay, and finally it will constitute one of the charms of the household lot. There is money in this business, at times, and there is always good recreation and good company. Careful and kind treatment will secure their good nature, as among men. Next to man for intelligence, they always furnish good society, and inculcate good morals. And then, to make the home happy at the family table, they gather the nectar of flowers and sweeten the household meal.

My bees last year averaged me about 50 pounds of surplus comb honey to the colony, thus earning me $12.50 to each hive, or 150 per cent on their spring value. Besides this, they furnished themselves with abundant stores for winter. One colony gave me 120 pounds of nice comb honey, worth, as I sold it, $30, or more than 350 per cent, and the same colony laid in half as much more for winter.

We had a great harvest last year from the white clover, and thus we find that the honey crop is very much like the ice crop—uncertain. Of late, the years of "famine," have been more than the years of "plenty," but now, we trust, the "good time" is coming.

Brunswick, Me. C. M. HERRING.

REPORT OF THE PUNICS.

FRIEND ALLEY :—I promised a spring report of the Punics.

I had drones of this race flying Feb. 14th, when they were only one week old, and about three weeks earlier than the Italians, consequently I got several young Punic queens mated in February. My old Punic queen swarmed out March 17th, and one of her daughters on March 18th.

Now I will relate a circumstance in regard to the Punics that may be discredited by old bee men, yet it is true notwithstanding, and something that I never heard of, or read of, in any bee journal.

A swarm issued from a hive of Punics on March 18th. I caught the queen in the Alley queen trap; removed the old hive and put a new one in its place, and they came back and were hived successfully. On April 3rd another swarm issued from the same hive, which hive I examined at once and found that the young queen had been laying before she swarmed, and that there were queen cells in various stages of development, from just starting to sealed ones. I then examined the first swarm to see if the old queen had not got back into the old hive, but she had not, so I went to one of my neighbors to whom I had given a Punic queen last September and related the circumstance to him, and lo! his bees had done the same thing as mine, and he had thought, as I did, that the old queen had got back into the old hive, but we examined and she had not.

The Punics have other peculiarities; for instance, they build a great many queen cells before swarming. I counted those in one hive as soon as the swarm issued, and there were fifty-nine, and I think they started many more, from the eggs that were left in the hive. They build up and fill the hives much more quickly than the Italians. They are more prolific and their brood is more compact than any other race; they put their brood within one half inch of top bar, and when mated to pure Punic drones they are the gentlest bees I ever saw. They work in all kinds of weather, and the drones will fly in the rain.

Visalia, Cal. J. GREGG.

A COMBINATION QUEEN-TRAP AND SELF-HIVER.

Herewith I give a brief description of a device for self-hiving swarms and for catching drone bees. The arrangement is merely a large drone-and-queen-trap. It is the same in all respects as the one

described in Supplement of the May API with this difference: The one described in May is a brood-chamber placed in front of a colony about ready to swarm, and the drone-trap in front to catch the queen when she comes out, while the bees are hived in the box. The one here described is a hive, and trap combined, in fact it is nothing more than a queen-trap made large enough to hold a big swarm of bees. The ordinary queen trap has but one tube for the drones and queen to pass through into the trap. This arrangement has four tubes, and as surely as a drone ventures out he is trapped.

This device can be easily attached to any style hive. Little labor is required to adjust it to hives having no porticoes. It can be used as well on those hives having porticoes, by making a covered bridge to connect the hive and self-hiver. A stake is driven in the ground for front end of swarmer to rest upon.

One comb is placed in the swarmer for the bees to cluster upon when they swarm.

The queen finds her way back, to the comb in the box through perforated metal having holes large enough to let her pass, but which are too small for the passage of drones.

This hiver cannot be sent by mail. The best way to do is to purchase the right to make them, and either manufacture or get the nearest dealer to get them out.

I will sell an individual or farm right, and one sample hiver and deliver the same free in any part of the United States on receipt of $5.

I guarantee to pay $10 in every instance where the trap does not catch every queen that comes off with a swarm. It will not fail to do that in any case.

In case any desire to purchase the combination trap and self-hiver, I can ship them by express at the following prices: Per half dozen, one made up, five in flat $4. Per dozen, one nailed, eleven flat, $7. One sample, nailed, $1.00. Whole weight of one hiver about 3 lbs.

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EDITORIAL NOTES.

10,000 ONE-PIECE SECTIONS.

I have in stock 10,000 first quality, one-piece sections of G. B. Lewis & Co. make. These sections do not break when handled, are white as snow and as smooth as it is possible to make them. Price, $4 per 1,000; 2,000, $7.00.

It has been a hard time since May came in for queen dealers. However I have managed to get a good many cells started and to rear about 200 queens

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Some dealers claim to have five banded bees I can see but one very wide band that nearly covers the entire body of the bee. These bees are very handsome and very energetic workers. Shall have 100 such queens ready to mail second week in June.

Notwithstanding the backwardness of the spring, the bees commenced to swarm about May 12.

In September last we introduced to a rather weak colony a Punic queen; but it was too late to say much regarding the character of the bees that subsequently hatched out. We find this spring that they are doing finely. The queen is very prolific, and the bees behave very much like Italians; in fact, they resemble them in many respects, except in the conspicuous absence of the yellow bands. They look different from the Carniolans and also from the common blacks. We believe it has already been intimated that the Italians and Punics are descended from a common ancestry. The fact that their original homes are not so very far apart, and that they are alike in disposition and general temperament, may make this possible.—A. I. ROOT in *Gleanings*, May 15, 1892.

For the thinnest foundation 14 to 16 sq. feet to the pound, send to W. H. NORTON, *Skowhegan, Maine.*

Speaking of the unwarranted attack of the Punic bees in a certain paper, one of the most prominent beekeepers in this country says: "I have just stopped the ———. I regard the slur upon the Punic bees and yourself one of the meanest things that ——— ——— ever wrote. I have always told you he was a bad man at heart, and now I think you will believe it. If the management of that paper allows such stuff as that to go in the journal, and such long, personal articles as Lowmasters', I am done with it. They cannot do you any great harm. Most beekeepers know you have labored hard for the general good for many years—for almost a generation—and your long record for good will not be destroyed by any one man, or a dozen men, who do not view a question in beekeeping just as you do. Most men who know you best will believe that your hard efforts to breed a better bee, or to import a better race, are due to your great interest in our pursuit and a desire to see the industry made profitable to all who engage in it. I shall sincerely hope that your efforts to give the American beekeepers a better bee may be appreciated and amply rewarded.

From all I can learn the Punic bees are at least quite a different variety from what we have heretofore had, and I am hoping that they may fully meet all that has been claimed for them. At all events, be of good cheer, my friend, and if there is anything I can do for you just let me know."

The above is from the pen of one of the best known beekeepers in America. To say that I appreciate his friendship and kind words does not begin to express my feelings

No, my friend, those evil-disposed persons can do no harm to any one. I have stood the abuse of a certain click of jealous people for a good many years, and think I can stand it for a good many more years to come, and not be in the least hurt. Slander, when dealt out by a jealous person, is taken for what it is worth Every intelligent being in the land well knows why I am berated by certain parties. "Whom the gods would destory they first make mad." This not only applies to the people, but to the paper as well, that is publishing such trashy personalities. I have no doubt that the paper that is using its columns so much for personal abuse is paid for the space taken, as no publisher can afford to do such business unless paid for it.

Notwithstanding the slurs and abuse, I am not in the least daunted, and shall continue to maintain the stand I have always taken for the advancement of apiculture.

When an enemy is obliged to hunt the world over and make use of private correspondents in order to gain a point against an opponent, he is indeed hard pushed for material with which to slay the enemy. A certain person is guilty of doing this thing in more cases than one, if the parties quoted tell the truth.

The readers of the API have not forgotten what was said editorially in the April issue concerning the cry of humbug and the abusive treatment heaped upon the poor fellows (who dare offer something new for sale in bee supplies) by some of the bee-papers and by a few of those who run a notion they are prominent bee-men. Below is an item taken from the A. B. J., of March 17, which corroborates what the API has often said:—

I see my name mentioned on page 311 by some correspondents who ask whether my method of preventing after-swarms is a humbug. I wish to thank you for your unselfish answer. I presume now that I am expected to offer an explanation. I am no humbug; neither is my method a humbug. I am neither deceived in it, nor do I wish to deceive others. I sent out 300 circulars as a feeler, thinking that if there was a disposition to want it, I would then advertise it in the different bee periodicals I do not blame any person for making inquiries, but they should be careful not to get me or any one else into disgrace unthinkingly.

E. J. CRONKLETON.

Just what method the editor of the A. B. J. advised Mr. C. to adopt to bring his invention to the notice of the public is not stated. Judging from what Mr. C. says, he could not have been used more meanly had he developed or imported some new race of bees. Be careful, friends, how you display enterprise and brains before certain people. It is like casting pearls before swine.

It is time such stuff was left out the papers. When an editor has nothing better to publish than articles written by fault finders and writers who never have a good word or a practical idea to give the public, it is time to close up business. It is a notorious fact that those people who spend their time in writing abusive and personal articles, and berating those who do write for the good of the beekeeping public, never have one word to say, or an idea or good suggestion to offer that will in any way benefit those who pay for and read the bee-papers. When a person has devised and tested an implement in his apiary and found it of value, why call him a fool, humbug and fraud? Would it not be much the better plan to try the new article, and if there are any weak points in it, why not in a manly way point them out? I do not believe in hanging a man and then giving him a trial afterwards—in all cases. It seems Mr. Cronkleton was accused of trying to defraud the public before any one had even seen or tested his method.

An old subscriber to the Api writes thus: "Please discontinue the Api. My home is left very sad and lonely. On the 26th of October my only child, a young man nearly 21 years old, died; the 10th of December my father, aged 86, died, and my wife has been sick nearly all winter. I am in poor health and do not take much interest in anything."

Ross, Iowa. CHAS. KIBLER.

Well, the world has used Brother Kibler pretty hard. We all, sooner or later, have some very bitter experiences, and know how to sympathize with our afflicted brother.—ED.]

One of the greatest mistakes made by a majority of beekeepers at the very outset is the manner of buying queens and supplies. There is an everlasting hunt for cheap queens and hives. How often we see beekeepers who would not plant poor seeds at any price, search for cheap queens and hives, and in the end, some far-away breeder or dealer fills his order with queens or bee hives that a first-class beekeeper would not use even if he could get a bonus for so doing.

To the above I can say amen to every word Mr. T. says. No matter what the article offered for sale is, if it is offered below the regular market price it is not cheap, but in most cases mighty dear, and in the end very high.—ED.

A pencil mark across this indicates that your subscription has expired. Unless you notify us at once that you desire the paper continued, no more copies will be sent to your address. We are ready and willing to continue and wait a reasonable time for pay if the money is not at hand to remit with subscription. Now please attend to this matter at once, or you may forget all about it.

Please find some friend who will send in his subscription with yours.

On April 9th I visited an apiary of ten colonies of golden Carniolan bees. The queens were introduced to black colonies in June, 1891. The bees are all in Bay State hives of the closed-end frame pattern. Every colony seemed ready to swarm, so full of bees were the hives.

This not only speaks well for the bees, but of the hive also. Now I do not wish it understood that this is a puff for the purpose of selling the hive; it is not. I do not care whether I ever receive another order for a Bay State or, in fact, any other hive.

I have selected some of the best colonies in the above apiary to rear queens from the coming season. Of course, after presenting such evidence of the genuineness of the golden Carniolans, no one will refuse to purchase queens of this race or have any fears of being imposed upon. It now is positively known that there is no humbug about them. The *British Bee Journal* has made this fact certain.

Our new bee house did not quite come up to expectations in the early spring; but at this time it does. Much work is being performed in the house that is usually done outside, that could not be done in the open apiary on account of cold weather. Those who rear queens can understand what work must be done in order to keep the queen-rearing business moving.

The temperature outside this morning June 4, stood at 40°. Inside, with a little fire, it was 60°.

There are several colonies in the house building queen cells, and others to which

eggs were recently given to start queen cells.

This is a cold, windy and cloudy day, yet queen-rearing is progressing rapidly in spite of the weather, as it is summer temperature in the house. In fact, were it not for the bee house with me, queen-rearing would be in about the same state as in January The house was designed to meet just the weather conditions now prevailing here in Massachusetts.

We really pity those queen-rearers who have no comfortable quarters and convenient appliances for rearing their queens. We were in the same fix for some thirty odd years. Now all is changed Other improvements in this same line are contemplated.

By June 1st, the weather permitting, I shall be ready to mail Golden Carniolan and Punic queens. As the Italians did not rear drones in season, queens of this race will not be ready until June 5th.

Were it not for our new bee house it would be nearly impossible to rear queens, the weather is so cold and unfavorable.

If a better race of bees than the Italians is wanted, try the golden Carniolans. If a better bee than the Carniolans is desired, try the Punics. Any of the races here mentioned are good, and will give perfect satisfaction

We now have queens of these races mentioned nearly ready to mail Send and get one of each race and test them in comparison Four dollars will get the trio, warranted perfect, and safe arrival guaranteed.

If you want safe introduction of queens guaranteed, just remit double the advertised price of the queen.

Never place a queen near the bees to which she is to be introduced unless the colony has been queenless 72 hours.

No queens will be lost in introducing if the colony is left queenless three days and introduced at sunset after the bees have been given a mild fumigating with tobacco smoke. Try it.

When a queen is received place the cage in some dark place, where it is not too warm, nor too cold. If the food is nearly consumed, just place a little piece of sponge which has a little honey in it on the wire so the bees can get at the food.

I find that nearly all the agents for the drone-and-queen traps are selling them under our advertised prices. Notice is hereby given that no traps will be for sale by agents after Jan. 1, 1893, except by those who sell them at the regular prices. After this season those who desire to use the trap must purchase a farm right, and then all such can get the traps manufactured when they find it for their advantage to do so.

Thomas G Newman, Editor of *American Bee Journal*, has returned to his office much improved in health. This will be good news to his numerous friends.

The flood at the west is bad for the bee business All dealers in supplies now feel the effects of the downpour that has visited that section of the country the past four weeks.

Mr. W. H. Norton, Skowhegan, Maine, has sent to *Api* office a sample of thin foundation manufactured by him. It is the thinnest foundation, that I have seen. The quality is also excellent.

There is a good call for the drone-and-queen trap. A few days ago I received from one agent an order for 2000 royalty stamps. The trap is one of the articles used in the apiary that saves time, labor, loss of swarms, destroys drones, etc. Sample trap by mail, 65 cents. Api one year and trap by mail, $1.10.

Api one year and one beautiful Italian queen, that will produce those wide yellow-banded worker bees, $1.50. Each subscriber to the Api is entitled to one Italian queen for 75 cents, each year.

I do not care for more orders for bee-hives till October 1892 My whole attention is now given to rearing queens.

All who desire are invited to visit the Api queen rearing Apiaries. One yard will be used for Italians, another for Punics, and still another for golden Carniolans. If those parties who think I am mixing Italian and Carniolans will call and look over our several queen rearing yards, perhaps I can convince them that no mixing of the races of bees is carried on here.

I shall be ready June 1st to receive all parties who desire to look over our methods of rearing queens: the bee-house, etc. I shall be glad to show any one how to prepare the eggs for starting queen cells. I

transfer no eggs, larvæ or royal jelly. Comb containing eggs in proper condition for queen cells is cut in strips; the eggs in alternate cells destroyed, which require but a few minutes time to do for 100 queens. Come one, come all, and if I can get you to look at some of my beautiful queens, I feel sure you will take away some of them.

Come and see the Punic bees at work and I desire you to say whether or not you ever saw bees more energetic and active, or more gentle.

A. I. Root says he hopes that his friend D. A. Jones is still at the editorial head of the C B. J. It is very evident that Jones is not at the head of the paper he so long edited — the paper has lost its head; it never did that when Jones had control.

Several parties have undertaken the little job of ruining the Api, and its editor. It really hope they will con inue in the same course, as no better adverti-ing scheme can be devised. If these growlers were working for the good of the cause, instead of for their own selfish ends, people would have some little confidence in what they say.

A WORD OF CAUTION.

The other day some one sent us a dollar bill in an unsealed letter. The next mail brought eight dollars in an unregistered letter. Now this is not the way money should be remitted by any one. Had either of these remittances been lost in the mails, most likely the sender would have accused us of stealing it. At any rate, it never could have been known certainly that we did not steal it, nor would there be any way, under the circumstances, that we could prove our innocence. We are accused of doing all the bad things we wish to be, and don't care to have that of stealing money laid to our door.

Register your letters or go to a bank and get the cashier's check; or get a money order payable at the Salem, Mass., P. O. This is the best way to remit. We shall all be honest in that case, and shall have plenty of evidence to prove our honesty when falsely accused.

CRITICISM THAT NEEDS NO COMMENT.

Judging from the article in last Api I should not think Cowan was blessed with a very good memory. You evidently have the right on your side, and you can afford to wait.

QUESTION BOX.

Will it do to feed honey that is taken from a colony that died of dysentery? J. F. B.

Yes, if fed in the spring. It is by no means certain that food causes dysentery in all cases. Much of this disease is caused by cold, dampness and improper ventilation.

Honey fed in the spring will mostly be used before fall, and for this reason there is little or no danger in feeding it to healthy stocks.

HOW TO KNOW A NEW SWARM HAS A QUEEN.

When a swarm issues through the swarmer, how can I know there is a queen with the bees in the new hive without opening the hive and examining?

The bees will not stay long in the new hive unless there is a queen with them. Move the new hive away and if the bees do not return to the old stand, it is evident that there is a queen with them.

Apiculturist Mail Box.

A GOOD WORD FOR THE PUNICS.

MR. ALLEY: — This has been a cold, windy day, the thermometer being at 46°. Cold as it has been, one of my Punic swarms has put in some good work. My golden Carniolan and Italian bees did not venture out. Doesn't that speak well for the hardiness of the Punics?

Lawrence, Mass. CHAS. E. DOW.

QUEENS SUCCESSFULLY INTRODUCED.

FRIEND ALLEY:—Last year I purchased a Golden Carniolan and a Punic queen of you. They were introduced in September, according to directions given in Api. I did not look for them till to-day (April 12) and find them both at home and doing duty. These bees tally with description. You may hear from me again in the fall.

Denver, Colorado. MART W. MOE.

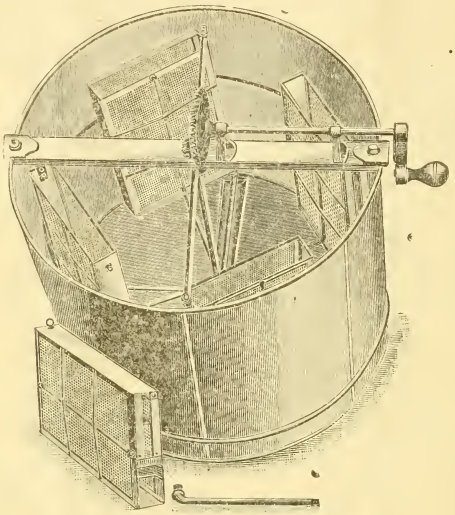
IT BEATS THEM ALL.

HENRY ALLEY: — Enclosed find $1 for Api and drone trap. The sample copy of Api was received and I find it to be the best bee journal, giving good instruction to beekeepers. It beats them all. W. C. M.

A REVERSIBLE EXTRACTOR.

R. F. Holtermann, of Brantford, Ont., has sent an engraving and the following description of the new "Goold Reversible Honey Extractor."

The engraving herewith illustrates a reversible honey-extractor made and



patented by E. L. Goold & Co., of Brantford, Ont. It can be made either as a two-frame or four-frame machine. For a two-frame Langstroth a can 23½ inches in diameter is required; for a four-frame the diameter must be 27 inches. The baskets are reversed by means of a positive lever motion. The levers radiating from the center shaft work in a slot in the bottom of the comb pockets.

Reversing the crank reverses the center shaft, which in turn revolves the levers a little way, and thus causes the pockets to be swung around.

Unlike the Stanley extractor, when one pocket reverses, all must reverse. This is a great advantage.

The extractor has been in the hands of Goold & Co. for over a year, their object being to perfect it thoroughly before giving it to the public. It was carefully tried by some customers and myself in the apiary last year, and several changes have been made since its first invention.

The machine took the first prize at the Toronto Industrial Exhibition last fall, for the best and most practical invention not heretofore shown at that exhibition. There were five inventions competing.

THE WORLD'S COLUMBIAN EXPOSITION.

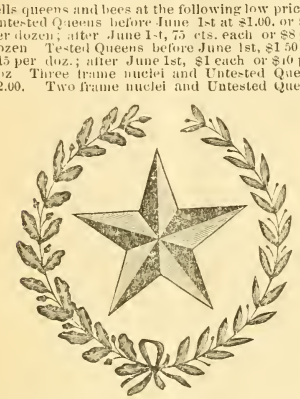
Send 50 cents to Bond & Co., 576 Rookery, Chicago, and you will receive, postpaid, a four hundred page advance Guide to the Exposition, with elegant engravings of the Grounds and Buildings, Portraits of its leading spirits, and a Map of the City of Chicago; all of the Rules governing the Exhibition and Exhibitors, and all information which can be given out in advance of its opening. Also, other engravings and printed information will be sent you as published. It will be a very valuable book and every person should secure a copy.

ADVERTISEMENTS.

I have prepared an illustrated circular which will be mailed free to all who desire my Italian, golden Carniolan and Punic queens. Punic queens reared from imported mothers only. Prices of hives, smokers, drone-traps, automatic swarmers, foundation, and in fact of all necessary articles used in the apiary given in my list.—HENRY E. ALLEY, *Wenham, Mass.*

THE LONE STAR APIARY

sells queens and bees at the following low prices: Untested Queens before June 1st at $1.00, or $10 per dozen; after June 1st, 75 cts. each or $8 per dozen Tested Queens before June 1st, $1 50 or $15 per doz.; after June 1st, $1 each or $10 per doz Three frame nuclei and Untested Queen, $2.00. Two frame nuclei and Untested Queen,



$1.50. Full colonies, $6 before June 1st; after $5, (in Langstroth hives.) My bees are bred from the best blood procurable in this country, 3 and 5 banded Italians. If Queens from imported mothers are wanted it must be stated in the order, otherwise American bred stock will be sent.

OTTO J. E. URBAN, Proprietor,
Thorndale, Texas.

SAY! YOU ☞ BEE-KEEPER!

Send for a free sample copy of **ROOT'S** handsomely illustrated, Semi-Monthly, 36-page, **GLEANINGS IN BEE-CULTURE,** ($1 00 a year) and his 52-page illustrated catalogue of

BEE-KEEPERS' SUPPLIES

☞ **FREE** for your name and address on a postal. His **A B C of BEE-CULTURE.** 400 double-column pages, price $1.25, ☞ just the book for YOU. Address

A. I. ROOT, THE BEE-MAN, Medina, Ohio.

HALF A MILLION SECTIONS.

Bees, Hives, Queens, Comb Foundation, Smokers, etc., etc. Must be sold. Send for price list to E T. FLANAGAN, Box 783, Belleville, Saint Clair County, Illinois.
Mention this paper.

Send 50 Cts. For my Book, entitled—'A Year Among the Bees,"—114 pages, cloth bound. Address

DR. C. C. MILLER,
MARENGO, ILL.

PLYMOUTH ROCK FOWLS.

Pure barred Plymouth Rock Cockrels, $1.25 to $3.00 each. Eggs from stock that will produce Prize Winners, $1.25 per dozen.

L. C. AXTELL,
ROSEVILLE, ILL.

A FREE TICKET TO THE
WORLD'S FAIR

would surprise every Beekeeper; so will our Catalogue of Apiarian Supplies, for it contains many things to be found in no other.

QUEENS, BEES, HIVES,

best quality, best queens, best bees,—in fact the *best* kind of supplies.

☞ Send for *Free* Catalogue to-day.

R. STRATTON & SON,
Mention API. HAZARDVILLE, CONN.

YOU WANT COMB FOUNDATION,

WE are headquarters for IT. Write for special discount; our prices cannot be equalled. We furnish EVERYTHING used in the apiary.

A CHAFF HIVE

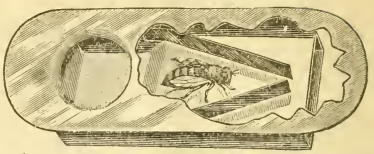
two stories, including 9 frames and two section cases, nailed for $1.95.
Circular on application.

I. J. STRINGHAM,
92 BARCLAY ST., New York.

LOOK! LOOK!

I manufacture the MODEL BEE-HIVE, FRAMES, SECTIONS, SMOKERS, HONEY CANS, SHIPPING CASES, BEE VEILS, etc., etc. Also breeder of ITALIAN QUEENS.
☞ Send for price list.
Address
W. R. STIRLING,
Box 9. ROND EAU, Ont.

PORTER'S SPRING BEE-ESCAPE.



Saves temper, time and bees. Prof. Cook says: "No bee keeper can afford to be without them." Wm. McEvoy, Foul Brood Inspector, Ont., Can.: "They should be used in every bee yard in the whole wide world." Thos. Pierce, Pres. Eastern N. Y. Bee Keeper's Asso'n: "The time will soon come when every beekeeper will use them." Send for testimonials and read what others say of them.

PRICES—Each, by mail postpaid, with full directions, 20 cents. Per dozen, $2.25.

If after three months' trial they are not found superior to all other escapes and satisfactory in every way, return them and we will refund your money. For sale by dealers.

In responding to this advertisement mention API. R. & E. C. PORTER, Lewistown, Ill.

Our New Club and Premium List.

We club the AMERICAN APICULTURIST with any of the papers below named. The regular price of both is given in the first column.

The American Apiculturist,	$0 75	
With Gleanings in Bee Culture,	1.75	1 50
" American Bee Keeper,	1.25	1.15
" American Bee Journal,	1 75	1.65
" The Apiculturist and one sample Drone-and-queen trap, by mail,	1.40	1 00
With sample Swarmer,	1.75	1.25
" Thirty Years Among the Bees and Beekeepers' Directory,	1.75	1.00
API and Italian Queen,	2.25	1.50
" " Golden Carniolan,	2.75	2.00
" " Punic Queen,	3.75	2 75

New subscriptions to APICULTURIST will begin with any number.

Money for queens need not be sent till the queens are wanted.

Five copies of API one year, $2.50.

Remit by money order on Salem, Mass., P. O., or by check.

Our new illustrated Price-list and Circular now ready to mail. Sample copies of API mailed free.

Address Henry Alley, Wenham, Mass.

RUBBER PRINTING STAMPS.

Best nickel plated self-inking stamp, with ink, pad, and one or more lines of letters, 50 cents. Has letter plate 3-4x2 inches. No. 4 has letter plate 1 1-2 x 2 1-2 inches, large enough for your business card or envelopes, letters, labels, sections, etc., $1.50.

50-page catalogue of rubber type stamps, etc., for a two cent stamp.

MODEL STAMP WORKS,
Shenandoah, Iowa.

PRATT BEE FARM.

I wish to call attention to the PUNIC BEES for your trial the coming season. All Queens will be bred from the original Punic stock imported by me in 1891. All Queens guaranteed first class, and introduction sure when directions are followed. Warranted Punic Queens, $3.00 each; two at the same time, $5.00. Virgin Punic Queens $1.00 each; $5.00 per 1-2 dozen. Introduction guaranteed.

SWARMERS, SMOKERS, FEEDERS, TRAPS, BEE-HIVES, etc., constantly in stock.

Illustrated catalogue free. Send 10 cents in stamps for my book on Nuclei Management.

E. L. PRATT,
Beverly, Mass.

EVERY BEE-KEEPER

should send to the largest and best equipped bee-hive factory in Massachusetts for free PRICE LIST, which will explain

SOMETHING NEW IN THE SUPPLY LINE,

that all beekeepers will want.

We make the best **DOVE-TAILED HIVES,** best **COMB FOUNDATION,** best **SECTION BOXES,** and the best line of BEE SUPPLIES of any one in Massachusetts, and sell them the lowest. Address,

DUDLEY BOX CO.

or F. M. TAINTOR, Manager. GREENFIELD, Mass.

THE AMERICAN APICULTURIST.

A Journal Devoted to Practical Beekeeping.

VOL. X. JULY, 1892. No. 7.

THE COMING BEE.

An article on "The Desirability of Producing a Larger Race of Bees," which was published in the APICULTURIST for March, suggested the possibility of securing a cross between our common races of bees and the recently discovered "giant bees" of India, in such a way as to produce a new race which should combine the desirable points of both parent races.

The particular advantage hoped for from such a cross would be to secure a race which would be able to gather honey from red clover and perhaps from other flowers which now go to waste, so far as the honey crop is concerned, because the bees which we now have are unable to reach the honey.

An experiment of the United States Fish Commission, on the breeding of fish suggests to me still another possibility in the breeding of bees. According to a recently reported interview, Mr. D. E. Crawford of the United States Fish Commission stated: "We have little doubt now that before two more years we shall have evolved what the seaboard public has been clamoring for for so many years—the boneless shad. Of course I don't mean a shad that is actually boneless but one that will be to all intents and purposes as boneless as the flounder of this country or the sole of England. This will have been accomplished by the cross-breeding of the shad, the flounder and a peculiar edible jelly-fish which is a staple food among the seacoast natives of Japan . . . . . Our experiments, while at first rather discouraging, now leave but little doubt of turning out successful. At first the crossing resulted in the production of a lot of jelly-fishes with an elaborate outfit of bones, which was just what we did not want, but time and study showed us our mistakes, and now we have a few hundred half grown shad with less than 18 per cent as many bones as the ordinary sort."

A few years ago when the belief in the unalterability of species both of animals and plants, was generally accepted, the attempt to alter the bony structure of the shad would have been regarded as a hopeless undertaking, but now that so much has been accomplished, no one can say what the limit of possibility is. Prof. Goodale of Harvard University predicts the time when fruits of all kinds will be produced without seeds. There is ground for hoping that this result may be attained in the fact that the banana regularly grows without seeds or rather with only rudimentary seeds which appear as dark specks in the fruit and so do not interfere in the least with our enjoyment of eating the fruit and if these rudimentary seeds are planted in the ground, they refuse to germinate. Occasionally also an orange is found without seeds and there are many other facts which give good reason to believe that before many years we may enjoy the pleasure of eating seedless fruits of several kinds.

If we are to have boneless shad and

seedless fruits, it does not seem too much to hope that we may also have a race of stingless bees. It is said that there are at least two distinct races of stingless bees in South America, but these races have not much value as honey gatherers, and moreover they build combs with very thick-walled cells, and probably they would not be worth cultivating as compared with the European, Asiatic and African races but there is apparently as good reason to hope that these races may be used to give their one good quality of stinglessness to our common races as there was that the flounder and Japanese jelly-fish could be used for the improvement of the shad. If we can cross our present races of bees with the giant bees of India and obtain a race with long proboscis and perhaps increased size (if that should prove to be of any advantage) and cross this improved race with the South American stingless bees and by these crosses secure a race with all the good points of the Italian bee with the additional feature of a lengthened proboscis and with the sting taken away, we shall then have a race of bees which it will be difficult to improve. It might be desirable to improve still farther by breeding out the swarming instinct, and there appears to be no reason why the swarming instinct cannot be bred out of bees as thoroughly as the sitting instinct has been bred out of certain races of domestic fowls; but now that swarming can be so thoroughly controlled by the use of queen traps and automatic hivers, this point is not as important as it would otherwise be.

Of course no one knows as yet whether it will be possible to secure a cross between our common races and those of India or South America, and no one knew whether a cross could be secured between the shad and the flounder until the experiment was tried; but now that the experiment has succeeded, the process seems so simple that we wonder why it was not done before.

It seems to me that this matter is of sufficient importance, and the prospect of success sufficiently great, to justify the agricultural department of the United States in undertaking the cost of the experiments. The cost to the government would be trifling in comparison with the benefits which would be gained if the experiment should be successful; but very few individuals who are competent to do the work would have the means to carry out the experiments at their own expense, because a residence of a few years in South America would perhaps be necessary in order to study the habits of the stingless races in their native country and to do this it might be necessary to domesticate the bees if this has not already been done.

I have not seen the statistics of the last census; but according to the census of 1880 the honey crop for 1879 amounted to twenty-five million pounds or about half a pound for the year to each inhabitant of the United States. At an average price of ten cents per pound, the value of the honey crop for that year would be about two and one-half million dollars. If we had a race of stingless bees the value of the crop would soon be doubled, for many would be induced to go into the business of beekeeping who are now deterred by fear of the stings or who live in thickly settled villages and hesitate to keep bees for fear that their neighbors will consider their pets a nuisance. Even in the oldest and most thickly settled states the number of bees could easily be doubled without exhausting the honey supply, and in suitable places by planting special crops there is no limit to the amount of honey which could be produced. Some may argue that an increased supply of honey would mean lower prices, and that since it is not easy to find a market for the present supply, it would not be possible to dispose of a larger quantity, but experience shows that as the supply of any article of food increases, the demand always keeps pace with the supply. In the memory of men, who are not yet very old, it was formerly very difficult to find a market for tomatoes, but

I remember a few years ago talking with a farmer who was then preparing a load of tomatoes for market and he remarked that it was at that time easier to sell a wagon load of tomatoes, than when he first began to raise them to sell a peck. The reason why it is difficult to sell honey is that people generally have not learned to use it. Eight ounces per year for each person in the United States seems a very small quantity, but I presume that a large percentage even of that quantity is sold through the drug houses for medicinal purposes.

I have described what I believe is "the coming bee" and it seems to me that there is nothing impossible or unreasonable in the ideas advanced. If a proper amount of enterprise is shown I see no reason why we should have to wait many years before the ideal is realized, because breeders are now beginning to understand the science of breeding and are giving up the old haphazard methods and therefore progress is certain to be much more rapid than it has been in the past.

New York City. J. EDWARD GILES.

BEE-NOTES FROM SLEEPY HOLLOW.

FULL SHEETS OF FOUNDATION.

My objections to full sheets of foundation in brood frames and especially in sections have called out numerous criticisms both in the journals and in private letters. I am as far from being convinced as ever. The only valid objection I find to my position is made by Mr. Demaree, when he states that in securing combs for extracting purposes he would use full sheets of foundation. That is right. So would I, and I had so stated in the notes from which my article was written, but by some oversight I omitted to state the exception. It is not my intention to discourage the use of foundation. On the contrary, I regard it as indispensable to successful honey production; used in moderation it is certainly a good thing, but used in excess it is a detriment when we view results from a dollar-and-cent standpoint. I am well acquainted with men owning from four to a dozen colonies of bees who have in the last two years spent more for foundation than their entire honey crops with bees and hive thrown in would bring in the market. And while I am kicking about needless expense in beekeeping I am going to give one gentle little kick about buying so many queen bees. These same men mentioned above, with their half dozen colonies each, have spent more money on queens in four years than I have spent in twice that time with my twenty-five to thirty-five colonies. Is is all the biggest kind of nonsense. If a man has the colonies of black bees that he wishes to Italianize what business transaction is more absurd than for him to buy ten dollar queens to acomplish the result. Two queens will do just as well as ten and a good deal better when the expense is figured. Raise drones from one and queens from the other and the work is done. It is all very well for queen breeders to push the sale of their wares whenever possible, but it is just as well for beginners to understand that it is not absolutely necessary for them to buy unless they really want to do so. There is not half as much difference in queens as some writers would have us believe. Now and then we find a queen hopelessly bad and of course she should be promptly decapitated; but very likely right beside her hive stands another whose bees have done remarkably well. Now it is just as well to supply a queen from this hive as to send away for an "extra select tested" and pay $5 for the fun of doing it. I know I am writing rank heresy but I will abide by it. I believe in "fresh blood in the apiary" at frequent intervals, but I don't believe in consuming the profits to get it there.

BAD WEATHER IN IOWA.

The bee men of western Iowa have the blues. Last season the honey crop was a failure and most colonies had to be heavily fed for winter. There was considerable honey dew late in the

season, and that or some unknown cause has fairly slaughtered the bees since January. Colonies perished by the score in the cellars and the alarmed owners placed those still living on the summer stands as soon as a few fair days came in the spring. But it was jumping from the frying pan into the fire. Storms of sleet, snow and cold rain have followed each other in swift succession and now to this sixteenth day of May the bees have had but three or four days on which they could carry pollen. The mortality on the summer stands has been greater than it was in the cellars. All the bees in many small apiaries are dead and it is the opinion of many beekeepers in this vicinity that fully 75 per cent of the colonies in this part of the state are dead. Of course most of the remaining colonies are weak and the prospect for a good crop of honey is most discouraging.

Z. T. HAWK.

Denison, Iowa, May, 1892.

A RICH TREAT.

The April and May numbers of the APICULTURIST have come to hand, filled as usual with matters of absorbing interest to the wide-awake beekeeper. Mine were eagerly devoured as they always are, and then I have food for reflection for a month to come. It is always a rich treat for me to read the AMERICAN APICULTURIST. I esteem it highly and read it with profit.

I was particularly interested in the April number. The "Familiar talk about bee culture" was specially suggestive for this season of the year when work in the apiary is being planned and preparation is being made for securing the honey harvest when it comes. Then, too, the enumeration of the good qualities of the Punic bees was an epitomized description of just the kind of bee that will be profitable in this climate and at this altitude, if they prove to possess as many valuable characteristics here as they have developed in the old Bay State. I must test them this season.

But if you could see my back numbers of the API I suspect you would feel confident that I did not place a very high estimate upon them, judging from their baggled, mangled appearance. The truth is I am making a scrap book and all the bee papers I get are compelled to contribute to it, but the API most of all.

In other days, I used to read some good thing in a paper and think now I will keep that, and adopt the hint given. But when I wanted to put the suggestion in practice months afterwards, perhaps I would have to rummage over all my bee papers, and perhaps would be unable to find it after all.

Latterly, I have adopted a different and I think a better plan. Whenever I come across in my reading some, to me, brand-new idea, some description of a better method than I had learned of performing some of the operations about the apiary, or I see an account of some cuter trick than I had ever thought of which some other person has found out for managing successfully the little honey gatherers, my scissors come into active play and I embalm it in my scrap-book.

I arrange the items under appropriate heads: "Rearing queens," "introducing queens," "artificial swarming," "producing honey," etc., etc., etc. When I wish to refer to some particular report of a desirable way of doing things I turn to my collection of clippings and under the paper heading I find at once what I am searching for. I find this method of preserving the accounts given in the bee papers of the best results of the experiences of practical beekeepers to be a great convenience, and a saving of time where the time of the apiarist is most valuable.

Trinidad, Colo. F. O. BLAIR.

GETTING DRONE COMB MADE.

FRIEND ALLEY:—Your way of getting drone comb made is O. K. Thanks for the information.

Thorndale, Texas. O. J. E. URBAN.

PREPARING BEES FOR WINTER.

"TELL us what you and your neighbors are doing in bee-keeping," says the editor of API.

In response to this I will tell how I have prepared my bees for winter. The middle of September found me with 42 swarms of bees. Caring to winter only about 25, the question arose, What shall I do with the balance? I decided to examine them and unite where practical, which I did in this wise. After they were well smoked I would examine two or more swarms at the same time. I would select a complement of such combs as I chose, arrange part of them in one of the hives, and shake the bees from the balance of the combs, either in the hive between the combs, or in front of the hive and let them run in at the entrance. I would then insert the full complement of combs. Some time during the work, I would find and destroy the *poorest* queen. I would make a careful estimate of the honey in the newly arranged hive. If the amount fell short of 25 lbs. I would feed sugar syrup till they had from 25 to 30 lbs. Thus I went through my apiary, and reduced, by uniting, my 42 swarms to 25.

I did not, in all cases, put two swarms into one, but sometimes would divide the bees of the third swarm, and put them into two other swarms.

This method enables me to save my *best* queens. In the present case, my queens are all young ones, save about two. It enables me to *know* that my bees are strong both in bees and stores. I use no division boards.

This done, I put over each hive an outside case, with dry packing between the outer case and hive, with a Hill's device or something similar, and a good, thick, dry, porous cushion over the frames, leaving a good-sized passage way out. Last year, I subjected my bees to a similar treatment, and wintered without loss.

Sunapee, N.H. J. P. SMITH.

COMMENTS ON SECTIONS, FOUNDATION, ETC.

IN the May issue of the API the editor gives some "pointers for beginners," which I do not think that we can all exactly agree to as to sections and foundation. For sections he says: "Use the one-piece. They are the best by all odds." Why are they the best? Do all large honey producers say so? I will call your attention to James Heddon, P. H. Elwood, J. E. Hetherington, Julius Hoffman and others I might mention. Those above named buy the 4-piece box in orders from 5,000 to 40,000 lots. Why do such men as these use the 4-piece box? It can't be that they think that the 1-piece is better. I will say as a manufacturer and dealer, that my sales show more than 10,000 to 1,000 in favor of the 4-piece box. I have no preference, as I make each kind and advertise each just the same. The 1-piece box can probably be put together a little the faster, but which is the best box when together? I do not hesitate to say as per my experience, that the 4-piece box, if made as it should be, will stand a great deal the most handling, and be all right; and as it is made of harder lumber it ought to be as smooth; not so badly stuck up by the bees, and more easily cleaned. I guess on the whole the time saved in cleaning would offset the time in putting together.

We will pass on to section foundation. I find this stated: "For sections, no foundation can be made too light." Well, I don't disagree in that. But by turning back a couple of leaves I find a statement which reads like this. "The thin flat-bottomed foundation cannot be excelled by any other in the world. No taffy, etc." Now, friend Alley, this seems to give me the opportunity to send you a sample of mine, which I forward by express to-day. You say it cannot be too thin; if this is so, and I rather think it is, then I am in it; as I anticipate that I can make the thinnest foundation made; as was stated in the

American Bee Journal last season. In the pound I send you there are thirty-four sheets 4 by 16½ inches, making 15½ square feet to the pound. The walls I think you will see have rather more wax than the flat bottom, but the *base*, if you will just press a little down flat, like the other, you will see it is thinner, or, weigh it and see which has the most square feet to the pound. I think the way this foundation is made, that the wax is not pressed together quite so solid and tough as the other; this is sort of rolled out, where the other is pressed. This sample is not got out as a *sample*, it is just taken from my stock, as an average, for I can make it 16½ feet to the pound; but of course as thin as that it would be expensive.

Skowhegan, Me. W. H. NORTON.

Because a few people purchase goods in large quantities, that must not be considered a guarantee of quality or practicability. Ninety-nine out of every hundred beekeepers would decide with the API that the one-piece section is by far the best in all respects. I purchased a few bees in Cary hives a few days ago; one of the hives had twenty-eight two-pound, 4-piece sections on it and bees at work in all of them. Being obliged to ship the bees fifty miles, I thought it best to take off the sections and brush or shake the bees out of them. I tried to do so, but they came apart as soon as I took hold of them. I could not handle them anyway. And this is the trouble I find with the 4-piece section; they cannot be handled.

There is no trouble handling the one-piece box.—ED.]

WE HAVE IT.

MR. ALLEY: I think if a swarmer could be constructed to collect all the drones and keep them from the workers while at work, it would be the boss swarmer. As I am engaged in an office, it is not always convenient to be about when swarms come off. CHAS. W. DICKSON.

Stellarton, N. S.

Our new swarm-hiver, described on p. 111, combines all the good points above mentioned. This is the very point I have experimented upon the past three years to accomplish. This self-hiver will be found to bear the right name, Perfection. —ED.]

PRESERVING BEE-PAPERS—BEE-KEEPING FOR WOMEN—WINTERING BEES—THE TRAP, ETC.

THE Dec. No. of the API just received, which closes the year for 1891 is *good*, in fact I don't see how it could be better. I wonder how many of its readers have all the numbers for the year saved, and preserved as a book of useful information on beekeeping?

Perhaps some people can read each number and remember all it contains by reading it once, and thus have it stored in the mind ready for use when wanted, but I confess that I can't. So I save my papers, and now while winter is upon us, I read them over again. While our little friends and helpers are safely stored away to await the coming of the spring blossoms, I know of no better way to improve a little time, than in studying what may be done for their benefit another year.

While the question of who shall keep bees is being so freely discussed and the idea that almost any one *can* keep bees appears to frighten some of the specialists—especially as almost any one, will include women—I wonder why poultry men and dairy men don't get scared because women can raise chickens and make butter?

While I am not a very old, nor a very experienced beekeeper, I have thus far found the occupation a very interesting one and the study something like some problems in mathematics: the solving of one part only leading to something deeper. And, as, when I went to school I could never be satisfied till I got to the end of the problem, I suppose I'll have to keep digging away at this one for all time to come. I thought I had the swarming part settled by dividing; but that way is not altogether satisfactory. Think I shall try the drone-and-queen-trap another year; but will take warning from Kit Clover and try and put my trap where I can find it when wanted.

I know of some bees that are being wintered in rather an odd way. Most bees in this locality are wintered on sum-

mer stands in double-walled hives. But as these were in single walled hives and their owner had no suitable place in the cellar, they were placed in a dark room, that is, in the northwest corner of the house. The room is well ventilated but has no outside opening in winter. A door opens into a room where a coal fire is kept day and night and on very cold nights this door is left open. The entrances to the hives are left wide open, and frames covered with sacks filled with leaves.

How do you think they will winter?

Perhaps they will be like the bees of a certain bee man of my acquaintance. I asked him last spring, how his bees were doing and he said "Oh ! the weather was so warm last winter they ate themselves to death." There is no doubt, that eating was done ; but the question is who did the most of it, the bees, or the man?

MRS. A. L. HALLENBECK.

Millard, Nebraska.

BEES SWARMING; QUEEN-BEES.

In late issues of the API, you have asked beekeepers to relate their experience. Here is some of mine. It may not be of any value to you, but some of it is quite contrary to some of the bee literature floating around ; some in school books, some in expensive works of reference. Colony No. 1 (built up from nucleus purchased of Mr. Alley) sent out a swarm June 24, 1890, which reduced No. 1 five pounds in weight. Had on queen-trap and supposed the queen was safe, although after the bees were all in the air I could not distinguish her from drones in the trap. Though the bees had all clustered before I took the trap off. The old hive was covered with a sheet ; the bees all went back to the trap.

They seemed very loath to enter the new hive, in which were three nearly full combs, having some stores.

Finally, put the trap with adhering bees on top of the frames and drew the trap cover. After a while they went down amongst the combs.

The next morning they seemed to be hunting for something outside as though they were queenless. Examined them in one week, found no signs of queen.

Examined again July 6, and found the three frames pretty well filled with drone brood by laying workers as it afterward proved. July 8, another swarm came from No. 1 (fourteen days between) which reduced the weight seven pounds. Same day ordered queen of Mr. Alley. Saturday eve, July 12, cut out all queen cells in No. 1, except two of the largest and finest in one frame, which I put into the hive with the laying workers. July 13, the queen from Mr. Alley was successfully introduced to No. 1. In three or four days examined No. 2 (the first new swarm) and found one of the queen cell caps cut off evenly, the other cell was torn into and a large part of it removed. Saw the young queen, a fine large one. Same day No. 1, still had plenty of sealed brood. Cut the cappings of the drone brood and that young queen hustled things in that hive, although they got pretty low before the young bees got out for forage. They got pretty strong for winter.

Query : Did the old queen come out with the first swarm?

BEES DON'T ALWAYS DIE OF COLD.

We had a little experience a year ago last January which shows that bees do not always die from the effects of severe cold. A small colony, or nucleus (the result of a division the August previous) not much over a quart of bees in all, were left on the summer stand to winter. Walls double ; 1¼ inch air space.

Along in the month we had a great blow, the mercury going considerably below zero. Being away from home myself "from early morn to dewy eve" Mrs. Swain about noon thought to look about the bees, and was somewhat startled to find the cap and all the covering blown from that little colony. How

long it had been off nobody knows, but the gale had continued furiously all of the previous night. They seemed to be clustered about the centre of the combs, quite a little way from the top. She hunted up the covering in a hurry of course and weighted it that time. The first pleasant day I looked after them and reduced the space to three frames "8½ by 14¼" inside. Two frames would give more space than they could occupy. Rather to our surprise this cold experience did not seem to affect them at all seriously.

They began the work of building up nearly as early as their neighbors, but being so few, of course it was a slow process. They became a very strong colony and swarmed in July but gathered no surplus honey.

Had on a queen-trap and let the queen go back.

MORE QUEENLESS COLONIES.

May 24, 1891, bees swarmed out. Put them into a hive with a lot of partly drawn combs. Found them loath to enter. Next morning running about as though queenless. In a day or two went to work apparently all right. Full apple blossom. Examined in one week. No signs of queen; combs about full of honey.

May 30, same old colony sent out another swarm, and June 2, still another with three queens. Let one of them run into the queenless hive. In the fall they had more honey than any other three colonies. After cutting out all the remaining queen cells I found one of the other young colonies without a queen. After vainly trying to catch a cell or queen for them I let them run. Their combs were a sight to see. Laying workers; dozens of eggs in some cells; drones of all sizes down to about one-half of that of a worker bee; about the same length but slimmer, wasp-like. I know this colony had a queen to begin with, was probably lost on the "wedding tour."

Here then are two cases in which bees were put into hives without queens and stayed and went to work, too, so the old saying that the "bees won't work without a queen," and that "if the queen dies," or is "lost, strayed or stolen," the "bees stop work and die," is proved to be not always reliable. Lost two pretty good colonies by starvation. Looking at the combs of one of them a few days ago I found lots of little white worms (about one-fourth inch long) in the dead bees. The hive had been kept closed all the while. How did they get there?

Tyngsboro, Mass. ASA M. SWAIN.

The queen was lost in some way, or did not succeed in passing into the upper chamber of the trap as is the case once in a while. Probably there were so many drones in the hive that the tube was clogged so that before she could enter the trap she returned to the hive.

I never knew worker bees to commence depositing eggs after being queenless but a week. Four weeks is, as a rule, as soon as they do such a thing.

A quart of bees, in a double-wall hive, will stand a long spell of zero weather.

The white worms in the dead bees is a "spontaneous" growth.—ED.]

THE WEATHER IN NEBRASKA.

We have had a week of pleasant weather and the bees are doing finely considering what the weather has been heretofore, only thirteen *pleasant* days from April 1st to May 22. It has taken feed and care to keep them rearing brood, but I think it will pay. That house apiary must have been quite a luxury if you have had weather similar to ours this spring.

My trap is doing good service but I can put it on only *one hive* at a *time* so I hope to receive the rest as soon as possible.

Caught about a quart of drones yesterday from one hive (that Alley queen I told you about in my last letter) and it is full again to-day, emptied twice yesterday. They had some drone comb but were not satisfied with that but raised a row or two of drones along the

top of nearly every frame of brood, in worker comb. Nearly every other colony has played the same trick on me this year.

Don't know why they did it unless I fed them too well. I can get rid of them by hunting the hives over and cutting their heads off but it is lots of trouble. The trap is much more convenient even if it has to be emptied out a time or two. Don't suppose I shall need to empty it on ordinary swarms but a twenty frame L. hive can accommodate quite a nnmber of drones I find.

MRS. A. L. HALLENBECK.

Millard, Nebraska.

A GOOD REPORT OF THE PUNICS.

H. ALLEY:—I send you report of the Punic bees. I find them the greatest honey gatherers I have ever known—it is really surprising to see them work. They have gathered nearly three times as much honey as my other bees. They have not swarmed, though the colony is a very strong one. I find them a little cross, but I can handle them with smoke all right. You can put me down for a solid Punic bee man.

Urban, Pa. G. S. KEOCK.

TRAP A GREAT SUCCESS.

MR. ALLEY: Your queen traps are a great success with me; no leaving my business to climb trees for swarms. If I find a queen in a trap, I remove the hive to a new stand, put another in its place, take trap covered with bees from old hive, shake them off in front of new one, let the queen out, see that she enters the hive and the job is done.

C. S. WEBSTER.

West Winsted, Conn.

"WHEN I STRIKE THE RIGHT PLACE."

MR. H. ALLEY: — Enclosed find cash for two Italian queens. I have bought queens of parties high up in bee culture in the west, but never could get one that would lay eggs enough to keep a colony alive. When I strike the right place there I will place all my orders for queens.

Columbiaville, Mich. M. WOODCOCK.

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Please find some friend who will send in his subscription with yours.

The Punics are proving a superior race.

In some parts of the country, bees have died off badly. Now is a good time to divide up the colonies and get ready for another year. No doubt many will be discouraged and give up beekeeping.

Orders for queens came in rather slowly, but at this time there is a marked improvement. I have been in the queen rearing business thirty odd years, and never saw the time that I could say I had no orders.

Bees never did better than this year up to date (June 21) and the prospect is good for at least two weeks more. Apple blossom honey is very fine this season. White clover honey is not very good. Perhaps that to be extracted later on may be better.

If any of the readers of the API would like to know what A. I. Root thinks of the Perfection and other Swarmers, they should send for *Gleanings* for July 1. The Root's are well pleased with the way some of the new swarmers work. They are a success, dead sure.

Brother Thos. G. Newman has been obliged to give up his connection with the *American Bee Journal*. Hundreds will regret his retirement. So far as the *A. B. J* is concerned it seems to have passed into good hands and the API wishes Brother York success in this new business.

Bees in New England did well on the apple blossoms. All the brood-chambers were filled with nice new honey and many one-pound sections have been taken from the hives well filled with fine apple blossom honey. At this date (June 13) white clover is in full bloom and the temperature in the shade 93°. The conditions seem just right for a good flow of white clover honey.

The Falconer Mfg. Co., Jamestown, N. Y., has been somewhat exercised by a free advertisement one of the new bee-papers has given them. It seems this new paper in order to make a respectable appearance used some of its space by giving a few free ads. An old adv. of the above company was used and persons who answered it claimed a five per cent discount on goods ordered. Falconer & Co. decline to allow the discount

I shall give away to subscribers of the API about twelve of the Perfection Self-hivers. I want them to go to such beekeepers as are likely to have swarms in July. My object is to test the swarmer. Bear in mind that I am ready to pay $5 for each swarm the hiver fails to hive. It will work successfully in every case, and it will hive all the bees that come off with the swarm.

I wonder what report Bro. Cowan will make of the Punics on his return from Africa. His object in going there is not quite understood. Whatever the report is, it will not change the good qualities of this fine race of bees. The color of them will be just as black, their dispositions just as gentle, their superior working qualities, hardiness, and great prolificness will not be in the least changed by any report Bro. Cowan will make.

Last year Dr. C. C. Miller gave a method for rearing queens in hives that have fertile queens. It was to place the queen and brood over a chamber of combs with a mat between, leaving room at end for bees to pass down. Place the eggs in the bottom hive and the result would be a "lot of fine cells." Well, I tried it. Not a cell was built. I then placed some cell cups which had been started twenty-four hours previously and the same as are prepared to place over brood nest containing a queen, and the bees destroyed all. If any man has made a success of Dr. Miller's plan, please make the fact known, as that would no doubt save the Doctors' credit.

Of the Punics, W. C. Green, Lakeland, Florida, says :—

"The Punic queen you sent me is doing fine work. Think I shall want some more queens soon."

Here is another report of queens which just came to hand from an old customer, Jno. S. Brendle, Shaefferstown, Pa. Friend S. says :

"I have been an old customer of yours the last four years, having received at the

very lowest over two dozen queens from you, and must say that yours are always the most prolific as well as the most vigorous swarm of bees I ever tried."

Concerning the Punics one man writes that they are very cross, while another says he can handle his without smoke or protection of any kind. There you have it; fact is, bees of most any race will sting more or less.

I have several colonies of Punic bees and can go into the apiary a thousand times a day and not get a sting. Can sit by the hive during the hottest part of the day and not be molested, nor will even one Punic bee attempt to sting. They are unlike other bees, as they never volunteer an attack. It requires but little smoke to handle them.

Until a few years ago I sold each year a large number of nucleus colonies, the same as are used in the Bay State Apiary for queens. These hives have four frames, and quite a colony can be reared in a few weeks in one of them.

Figure 1 shows the style of the hive, also a feeder placed in the top.

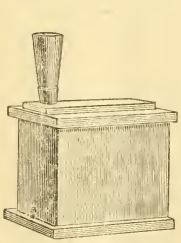


FIG. 1. *Nucleus hive.*

Will ship such colonies with a selected Punic, Golden Carniolan, or a beautiful Italian queen, including feeder for $3 per hive. When the brood begins to hatch the queen may be removed and the bees will rear one or two fine queens.

PERFECTION REACHED AT LAST.

After "fooling around" some little time I have finally hit upon a correct and practical self Swarm-hiver. The cut below fully illustrates it. As stated in June API, it is an arrangement of the drone-and-queen trap. The trap, figure 2, is made nearly twice as wide, that is, nearly twice as large, from end to end, than those usually sold for drone-and-queen catchers. It is also provided with four tubes, and the luckless drone or queen that sallies forth to leave the hive is sure to be trapped. The trap

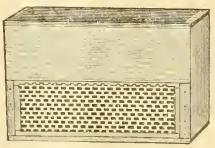


FIG. 2. *The Perfection self-hiver.*

has a metal front and back. This provides the needed ventilation to the largest colony of bees. Then, again, the entrance is so much wider than the one in the old style trap that the bees have no trouble in coming out and going in than they do in hives where no trap is used. In fact, this self-hiver is a superior drone-catcher, as no drone returns to the hive after once leaving the brood chamber; nor are they fussing at the entrance a long time trying to escape, as in the old trap when there are a large number of drones in a hive. Hardly does the drone go to the entrance when he discovers one of the four tubes, and, before he knows it, is in the trap. It is the same with the queen. As surely as she leaves the combs with a swarm she is trapped.

Figure 2 illustrates the Swarmer complete ready to catch a swarm. The is 18 inches long, 10½ inches wide box and 10 inches deep. This is large enough to give the largest swarm all the room they need to cluster in for awhile at least.

Figure 3 shows the trap, or queen-and-drone catcher. It is not attached

permanently to the box. Half of the front of box is cut away, and the trap is pushed in to fill the space and so that the front of the latter is "flush" with the front, or face, of the box. It will be seen that the bottom of the metal when the bees pass through is depressed, so the bees enter the hive easily and with as little delay as possible.

The trap is provided with a small swinging door at one end, so that the queen can be taken or shaken out, also for removing dead drones, etc. The trap can be used separately for catching drones when not used as a self-hiver. The box is provided with two covers; one is constructed of wire screen nailed to a light frame which is used so that the interior of the box can be seen without letting the bees out. The other, a common board cover, is to keep out sun and wet, and is placed directly on the screen cover. One comb is placed in the box just far enough back of the trap for a bee space between.

When a swarm issues, the queen enters the trap. The bees after circulating

FIG. 3. *Combination drone-and-queen-trap and self hiver.*

about in the air for a while return or they may settle on some tree and hang there for awhile, and then return to the hive. As soon as they reach the entrance they discover their queen, the very object they returned for, and the bees at once cluster in the box on the comb. I want it understood that when I say *the bees* I mean *all* that issued with the swarm; not even one bee will return to the brood-combs. This arrangement is a self-hiver in every sense of the word, as it catches the entire swarm.

It will be observed that the bees have but one piece of metal to pass through on their way out of and into the hive, and that is at the regular entrance; thus their passage in and out the hive is not seriously obstructed When a swarm has been self-hived in one of these Swarmers, they may be easily and quickly transferred to the hive they are to to occupy. As soon as the bees are all in the Swarmer, place the new hive upon the ground (or on a blanket) smoke the bees in the box and turn them down in front of the new hive, when they commence to run in, take the trap from the box, open the door and shake the queen and bees out among those at the entrance of the hive. Now isn't this an easy and interesting operation as well as a labor and bee-saving method? Just think how happy a fellow can be when he leaves home in the morning to know that on his return he will find his bees already in a box to be hived if they have swarmed during his absence. All he has to do on his returning home is to raise the board cover to the swarm-box. If the box is full of bees a swarm has issued. This is the only attention the bees need. His wife or attendant won't have a chance to say when the bee-keeper returns home, "the bees have swarmed and decamped." No, sir, no bees can decamp, nor will a swarm be found hanging fifty feet in the air on the limb of some neighbor's tree; in some chimney. or in the coving of some house.

The other morning a swarm came off just as I was going to the post office. They settled on the limb of a tree near by, when I returned twenty minutes later, the bees had returned to their old location, self-hived and so quiet no one would have selected that colony as the one that had just cast a swarm. Desiring to test the self hiver again, the bees were returned to the hive from which they issued. I was away the next forenoon getting at an out apiary, looking for queens to ship. On my return my wife said a swarm of bees had been out, and settled on a tree; she had wet them down to hold them till I returned, but when she looked after them later they had left and she had no idea where they had

gone. I said that I could find them. I went to the hive having the Perfection Swarmer on and sure enough, the bees were there all O K. I am ready to make this offer; I will pay $5 each for any swarm that the Perfection Swarmer does not self-hive, if used according to directions, sent with each one sold and which are mainly contained in the above description. Now, perhaps, a queen may fail to come out the hive, or may fail to enter the trap, so I will say that I will pay the sum named above for any swarm that is not self-hived *when the queen is in the trap*. Now no snide game is intended here, and I do not want to be so understood. I mean just what is said. The self-hiver has been thoroughly tested in my own apiary within a month and I feel warranted with the experience that I have had with it in guaranteeing that it *shall* self-hive every swarm that issues.

There may be queens in a second swarm that can pass through the metal; yet, with an experience of nearly ten years with the drone-and-queen trap, I have never known either a virgin or fertilized queen to pass it.

The last five years I have used Root's metal, and while it is not as smoothly made as some other brands, no queen has passed it with me; and as the price of this metal is so reasonable and so much less than other brands, I use and sell it, also recommend others to purchase it for queen excluders.

I propose to sell one self-hiver and the right to make the same for $5. My advice to those who desire to use them is to purchase the right and then get your swarmers sawed at the nearest factory, or supply dealer.

Another good way is for some one to purchase a township or county right and supply the beekeepers in such territory with traps and self-hivers. Understand that the right to make the self-hiver includes the drone-and queen trap also. When one has the right to make and use one, he also has the right to make and use both.

Those who purchase an individual right will be allowed a discount of 15 per cent. off regular advertised prices on all self-hivers and traps purchased of me. This also gives each purchaser the liberty to sell traps and swarmers in any part of the country.

Something about the Queens sold at the Bay State Apiary.

ITALIAN QUEENS.

This strain of bees are direct descendants of our famous One-hundred-dollar queen.

There are several daughters of this queen in our apiary that are equal in all respects to the original queen.

The workers from this strain are industrious, handsomely marked and possess mild dispositions. They will please any one who prefers the Italians to other races.

THE AMERICAN GOLDEN CARNIOLANS.

This strain of yellow bees were produced by selection and careful breeding from the dark Carniolan race, and were originated in the Bay State Apiary during the years 1890-1891. There is no Italian blood or mixture of any yellow race of bees in them so far as I am aware. What the golden color is I will not pretend to say; that it came with the dark Carniolan bees from their native country I do assert.

These bees are beautiful to look at; workers active, queens very prolific and bees very gentle. Can be handled in most cases without smoke, bee-veil or gloves. I guarantee that they will give satisfaction in any apiary.

PUNICS.

This is an ebony race. They came from North Africa and give more promise of being the "coming bee" than any race or strain yet imported. Every feature, movement and characteristic of these bees is in marked contrast to all other races. They are more active either on the wing or combs; fly more swiftly and gather honey from flowers that our native or yellow bees do not visit. Too much cannot be said in favor of this newly imported race of bees. I am speaking from experience regarding the Punics, and not quoting the opinions of any person.

Prices of Italian Queens.

Italian queens, reared from daughters selected from our famous one hundred dollar queen, will be mailed at the following prices:

One warranted queen,	$1.00
" select "	1.25
" tested "	1.50
" select tested "	3.00

The $3.00 queens are thoroughly tested for queen mothers, and in fact are as fine in all respects as it is possible to produce.

All my queens are selected, that is, a large number of virgin queens are reared, and the best are selected from the best and introduced to become fertile. No queens inferior in size or in other points are permitted to become fertile.

Prices of Punic Queens.

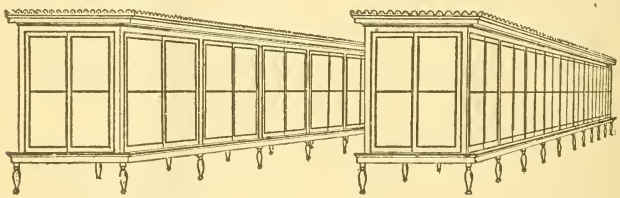
One untested,	$2.00
" selected,	3.00
" " tested,	5.00

Safe arrival and sure introduction of queens guaranteed when introduced by the directions mailed with each queen.

A discount of 20% allowed on all orders for more than one queen.

THE COLUMBIAN EXPOSITION.

The apiarian exhibit to be made at the World's Fair next year was written about by Dr. Mason, on page 760, of last week's BEE JOURNAL. Reference was therein made to something that Mr. W. I. Buchanan, Chief of the Agricultural Department, would publish soon, regarding the bee and honey exhibit. Below we give the special rules, and also an illustration of the proposed glass cases in which the exhibit will be made. We commend what Mr. Buchanan has to say, to the attention of our readers, and trust that they may now begin to prepare for one of the grandest apiarian shows that the world has ever seen. Here are the "Special rules and information governing the exhibit of bees, honey, beeswax and bee-appliances:"



1. Exhibits of honey will be classified as follows:

Class 1. Clover and basswood.
Class 2. White sage.
Class 3. Buckwheat.
Class 4. All light honey, other than enumerated in Classes 1 and 2.
Class 5. All dark honey, other than enumerated in Class 3.

2. Exhibits of honey produced during 1892, or earlier, must be in place on or before April 20, 1893.

3. Exhibits of honey in Classes 1, 2, and 4, produced during 1893, will be received between July 15 and Aug. 15; and in Classes 3 and 5 between Aug. 15 and Sept. 1, 1893.

4. The following information should accompany each exhibit.

a. Kind of honey.
b. Name of exhibitor.
c. Place where produced.
d. Character of soil in locality where produced.
e. Variety of bee.
f. Name of plant from which honey is produced.
g. Yield per colony.
h. Average price of product at nearest home market.

5. In order to secure a uniform, handsome and economical installation of honey and beeswax, the Exposition will erect suitable glass cases, of a uniform character, in which such exhibits will be made; the cost of these cases to be borne by the different State Commissions, Bee-Keepers' Associations, or by individual exhibitors, in proportion to the number of lineal feet occupied. These cases will become the property of such exhibitors at the close of the Exposition. Below is a very good illustration of the proposed cases.

6. Individual exhibits of comb honey will be limited to 100 pounds, and may be made in any manner the exhibitor may desire, subject to the approval of the Chief of the Department.

7. Individual exhibits of extracted honey must be made in glass, and must not exceed 50 pounds.

8. Individual exhibits of beeswax must not exceed 50 pounds, and should be prepared in such a manner as will add to the attractiveness of the exhibit.

9. Exhibits of primitive and modern appliances used in bee-culture, both in this country and abroad, will be received subject to the approval of the Chief of the Department.

10. Special arrangements will be made by the Chief of the Department for a limited exhibit of bees.

11. Collections of honey-producing plants, suitably mounted and labelled, will be accepted if satisfactory to the Chief of the Department.

12. The right is reserved to add to, amend or interpret the above rules.

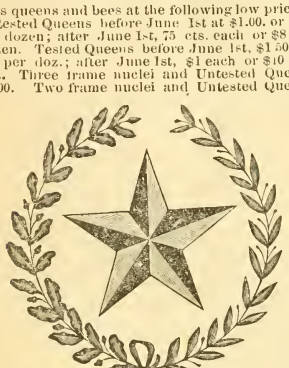
Signed, W. I. BUCHANAN.

ADVERTISEMENTS.

I have prepared an illustrated circular which will be mailed free to all who desire my Italian, golden Carniolan and Punic queens. Punic queens reared from imported mothers only. Prices of hives, smokers, drone-traps, automatic swarmers, foundation, and in fact of all necessary articles used in the apiary given in my list.—HENRY E. ALLEY, *Wenham, Mass.*

THE LONE STAR APIARY

sells queens and bees at the following low prices: Untested Queens before June 1st at $1.00, or $10 per dozen; after June 1st, 75 cts. each or $8 per dozen. Tested Queens before June 1st, $1.50 or $15 per doz.; after June 1st, $1 each or $10 per doz. Three frame nuclei and Untested Queen $2.00. Two frame nuclei and Untested Queen



$1.50. Full colonies, $6 before June 1st; after $5, (in Langstroth hives.) My bees are bred from the best blood procurable in this country, 3 and 5 banded Italians. If Queens from imported mothers are wanted it must be stated in the order, otherwise American bred stock will be sent.

OTTO J. E. URBAN, Proprietor,
Thorndale, Texas.

SAY! YOU ☞ BEE-KEEPER!

Send for a free sample copy of ROOT'S handsomely illustrated, Semi-Monthly, 36-page, GLEANINGS IN BEE-CULTURE, ($1.00 a year) and his 52-page illustrated catalogue of

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Mention this paper.

Send 50 Cts. For my Book, entitled—"A Year Among the Bees,"—114 pages, cloth bound. Address

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WORLD'S FAIR

would surprise every Beekeeper; so will our Catalogue of Apiarian Supplies, for it contains many things to be found in no other.

QUEENS, BEES, HIVES,

best quality, best queens, best bees,—in fact the *best* kind of supplies.

☞ Send for *Free* Catalogue to-day.

R. STRATTON & SON,
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YOU WANT COMB FOUNDATION,

WE are headquarters for IT. Write for special discount; our prices cannot be equalled. We furnish EVERYTHING used in the apiary.

A CHAFF HIVE

two stories, including 9 frames and two section cases, nailed for $1.95.
Circular on application.

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92 BARCLAY ST., New York.

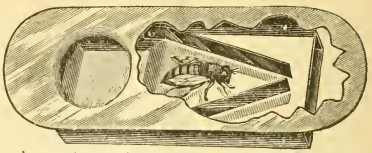
LOOK! LOOK!

I manufacture the MODEL BEE-HIVE, FRAMES SECTIONS, SMOKERS, HONEY CANS, SHIPPING CASES, BEE VEILS, etc., etc. Also breeder of ITALIAN QUEENS.
☞ Send for price list.
Address
W. R. STIRLING,
Box 9. ROND EAU, Ont.

PORTER'S SPRING BEE-ESCAPE.

Saves temper, time and bees. Prof. Cook says: "No bee keeper can afford to be without them." Wm. McEvoy, Foul Brood Inspector, Ont., Can.: "They should be used in every bee yard in the whole wide world." Thos. Pierce, Pres. Eastern N. Y. Bee Keeper's Asso'n: "The time will soon come when every beekeeper will use them." Send for testimonials and read what others say of them.

PRICES—Each, by mail postpaid, with full directions, 20 cents. Per dozen, $2.25.



If after three months' trial they are not found superior to all other escapes and satisfactory in every way, return them and we will refund your money. For sale by dealers.

In responding to this advertisement mention API. R. & E. C. PORTER, Lewistown, Ill.

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We club the AMERICAN APICULTURIST with any of the papers below named. The regular price of both is given in the first column.

The American Apiculturist,	$0 75	
With Gleanings in Bee Culture,	1.75	1.50
" American Bee Keeper,	1.25	1.15
" American Bee Journal,	1.75	1.65
" The Apiculturist and one sample Drone-and-queen trap, by mail,	1.40	1.10
" Thirty Years Among the Bees and Beekeepers' Directory,	1.75	1.00
API and Italian Queen,	2.25	1.50
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" " Punic Queen,	3.75	2.75

New subscriptions to APICULTURIST will begin with any number.

Money for queens need not be sent till the queens are wanted.

Five copies of API one year, $2.50.

Remit by money order on Salem, Mass., P. O., or by check.

Our new illustrated Price-list and Circular now ready to mail. Sample copies of API mailed free.

Address Henry Alley, Wenham, Mass.

RUBBER PRINTING STAMPS.

Best nickel plated self-inking stamp, with ink, pad, and one or more lines of letters, 50 cents. Has letter plate 3-4x2 inches. No. 4 has letter plate 1 1-2 x 2 1-2 inches, large enough for your business card or envelopes, letters, labels, sections, etc., $1.50.

50-page catalogue of rubber type stamps, etc. for a two cent stamp.

MODEL STAMP WORKS,
Shenandoah, Iowa.

PRATT BEE FARM.

I wish to call attention to the PUNIC BEES for your trial the coming season. All Queens will be bred from the original Punic stock imported by me in 1891. All Queens guaranteed first class, and introduction sure when directions are followed. Warranted Punic Queens, $3.00 each; two at the same time, $5.00. Virgin Punic Queens $1.00 each; $5.00 per 1-2 dozen. Introduction guaranteed.

SWARMERS, SMOKERS, FEEDERS, TRAPS, BEE-HIVES, etc., constantly in stock.

Illustrated catalogue free. Send 10 cents in stamps for my book on Nuclei Management.

E. L. PRATT,
Beverly, Mass.

EVERY BEE-KEEPER

should send to the largest and best equipped bee-hive factory in Massachusetts for free PRICE LIST, which will explain

SOMETHING NEW IN THE SUPPLY LINE,

that all beekeepers will want.

We make the best **DOVE-TAILED HIVES,** best **COMB FOUNDATION,** best **SECTION BOXES,** and the best line of BEE SUPPLIES of any one in Massachusetts, and sell them the lowest. Address,

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THE AMERICAN APICULTURIST.

A Journal Devoted to Practical Beekeeping.

VOL. X. AUGUST, 1892. No. 8.

YELLOW-BANDED BEES IN CARNIOLA.

EDITOR OF AM. APICULTURIST :—In reply to your inquiry of recent date I would say that the quotations attributed to me on page 80 of the AM. APICULTURIST for May, 1892, taken from the *British Bee Journal* are from articles I wrote, and, though in themselves correct, they convey, without further quotation from the same article, or others of mine published about the same time, quite erroneous impressions as to my views regarding yellow bands on Carniolan bees. Whoever has quoted my statement concerning the prevalence in Carniola of bees showing more or less yellow, evidently did not wish to have my explanation of this occurrence known. Nor would I like to have those who read the extract from the *British Bee Journal* conclude, because I quoted what had been said to me by "two intelligent beekeepers from Upper Carniola," that I necessarily subscribe to their views. These two beekeepers (the brothers Jeglic) say "that orange or rusty red bands are not a mark of impurity in Carniolans." But I thought then, and still think, that *they are a decided mark of impurity*. It would be but fair, after what you have published in connection with my name, to insert, also, my explanation of how it is that "there is in the Carniolan race a tinge of yellow blood that crops out every now and then, do the best one may."

First, let me say that I regard Carniolans as a distinct and very well established type—*one of the dark races*, and neither the history of beekeeping in Carniola, nor my observations while travelling and residing there and breeding Carniolans extensively, would lead me to think that *pure* Carniolans were other than dark colored bees—distinguished from common brown bees by a gray pubescence, which gives a dark ashy appearance.

The style of beekeeping now followed in Carniola has long been the same, as can be learned from the writings of Janscha, a Carniolan beekeeper who taught apiculture in Vienna under commission from the Austrian crown, and whose work was published in 1775, also from those of von Ehrenfels, Baron Rothschuetz and others. Migratory beekeeping is followed to such an extent that all hives are arranged for it, being long, shallow boxes (12 to 14 inches wide, 6 to 8 inches high, and about 30 inches long), which can be easily and quickly piled one upon another and side by side to the number of 60 to 75 on a long wagon, whose body is swung by hooks attached to the four wagon stakes. Whole apiaries, consisting of several hundred hives, are thus transported to distant pastures in one or two nights. Sometimes the railway lines are used, and I have seen a "bee-train," mainly of flat cars, bearing some 5,000 colonies of bees from the northern valley of the Carnic Alps to the central plains, where the fields are white with buckwheat in August and September. Every year beekeepers come from south-

western Carniola toward the central plains, and even from the adjoining provinces some colonies are brought. These provinces are narrow strips lying between Carniola and Italy. The native bees, as one proceeds southwest from the central plain of Carniola show more and more yellow. The majority of the colonies brought to the buckwheat pastures are sold at the close of the harvest to honey and wax dealers to be brimstoned, some are taken back home to be wintered as stock hives, but others remain in Carniola, having been selected to restock some decimated apiary, or start a new one. Little heed is given to the origin of the bees, or what their color may be, as long as they are strong in numbers, and have plenty of stores for the winter, and above all if the price is low. In this way bees from Austrian lands bordering on Italy, and which show more or less yellow, have been scattered about in Carniola, taken even back into the mountain valleys. They are soon lost among the gray bees of the country, or so merged into the gray as to be distinguishable only now and then, for the yellow which thus chances to get introduced is small as compared with the gray of the country.

We have had yellow bees in America for over thirty years, yet the race which had sole possession previous to the introduction of Italians shows but little yellow where no direct attempt has been made to replace their queens by those of yellow races; indeed, in many portions no sign of yellow is yet seen, and in general the bees of our country are still the common black or brown race. This, in spite of the fact that many Americans have tried to get the yellow races firmly established — has often given queens to their neighbors and introduced them gratis in order to get the blood of a given locality all changed to yellow. Americans are active and progressive, disposed to try new things and keen in discerning what is valuable; moreover, no beekeepers know how to rear and ship queens as well as do our own people. On the other hand, Carniolan beekeepers are ignorant, slow to adopt new ways or ideas, being prejudiced against all that is foreign. They do not import foreign bees and know little about queen-rearing, and not much more about shipping. In all branches of agriculture, they pursue the methods used hundreds of years ago, wooden plows, sickles, flails, etc., being the rule. Now, since in our country, with all the pains taken, yellow bees spread so slowly, can it be regarded as surprising that in Carniola, where the gray bees are as firmly established as were the black or brown bees when Italians were first brought here, the bees showing some yellow blood, but not pure Italians, which are annually brought there, should, under the peculiar circumstances mentioned as existing in that province, only show a slight influence and that irregularly, over the native gray bees? It seems to me that neither the history, the present appearance, nor the qualities of the race of bees found in Carniola, indicates that Carniolans were originally the source of the yellow bees of the European continent, nor that they were yellow at all. A careful examination of the subject made in Carniola itself and extended experience with the bees there lead me, as already indicated, to regard them as a distinct type of dark bees, and only accidentally contaminated by a small amount of yellow blood of hybrid Italian origin. This contamination is not so great, nor so well incorporated into the race as to show itself always and with uniformity. Few colonies show much yellow, and even when considerable yellow is present the workers are not uniformly marked. A rusty-red tinge on the first segment of the workers of certain colonies is frequent; but the majority are not so marked, especially in the north of Carniola, although in the south and southwest this peculiarity is more frequently met with than elsewhere in the province. In general, the yellower the workers are in Carniola the yellower the queens producing them are likely to be, but it by

no means follows that all yellow queens in Carniola produce yellow banded bees. The bees of golden colored queens are often quite uniformly gray in color.

Of course, it would be quite possible to take bees imported from Carniola and produce by constant selection of those on which the yellow was most plainly visible a full banded yellow strain; but I would not call them "yellow Carniolans," for they would owe their origin to an accidental impurity found in Carniola, and would not be bred from typical Carniolans. Carnic Italians, or better still, Carno-Italians, would tell more accurately what such bees actually were. If, as has been done thousands of times, hybrid Italians are taken to a locality where only pure blacks (the common German, or brown bees) exist, the surrounding apiaries, as is well known, will soon show some workers with yellow bands. And any person, understanding the principles of breeding, will readily admit that constant selection of those black or common queens as breeders, whose workers show some yellow, and the exclusion of drones from all black or common queens whose workers show no yellow, will eventually produce workers as well marked with yellow as any Italians, and this with no further introduction of Italian blood. But no one would claim that these bees should be called yellow blacks, yellow common bees, yellow German bees, or yellow brown bees. Yet there would be as much justification for some name of this sort as for the use of the term "yellow Carniolans" in connection with the yellow bees that might be bred by constant selection practised upon bees brought from Carniola, for the manner of producing both these strains would be exactly the same.

After locating in Carniola I pursued a course of breeding quite opposite to that described above, that is, I constantly selected as breeders the mothers of gray bees, and when I left there four years later my whole apiary was stocked with breeding queens whose progeny were quite uniformly steel or whitish gray, large bodied, fine workers, and remarkably gentle. After these years devoted to queen rearing in Carniola itself, preceded by a longer period of experience in importing and testing Carniolans by the hundred, I am still of the opinion that the course I pursued in adhering to the gray Carniolans as the original, the typical and preferable race, was the best. And I am pleased to say that this type of Carniolan is in no danger of being supplanted by yellow bees. This is especially true as regards the Upper Carniolan regions — the valley of the Save river and its tributaries, from which part of Carniola it is best to import queens if one wishes the race in its greatest purity.

Permit me a few words about the quotation from Mr. Cowan: "No one—in Europe at any rate—has ever seen or heard of pure Carniolans being yellow." As I do not agree with certain Carniolan breeders, whose opinion I have quoted, that "an occasional tendency towards orange or rusty-red bands was always the case with all Carniolans, but that it was no mark of impurity in the race," it is evident that my views accord with the statement credited to Mr. Cowan, and I fail to see in what way the writer on page 80 of the AMERICAN APICULTURIST has (in that article, at least) shown anything contradictory, unreliable, or incongruous in Mr. Cowan's utterances on this subject. The editor of the *British Bee Journal* does not of course by the mere act of publishing a communication subscribe to the views expressed by the writer thereof. He published my article containing my own statement that yellow banded bees are met with in various parts of Carniola, and also my quotation of certain Carniolan bee raisers who claimed that such bees were not impure. But it seems that neither Mr. Cowan nor myself think them pure. How he explains their impurity (if he has ever attempted to do so) I do not know, nor would I attach any weight to his views in this direction, for I do not consider him any authority in this matter. My own explanation,

already indicated, as to yellow bees in Carniola, is simply that Italian blood has been brought in from provinces bordering on Italy. And, though I do not hesitate to say that such yellow banded bees from Carniola are excellent workers, gentler and far superior to our common bees, and that their introduction into this country is therefore a great benefit to apiculture, this does not make them *pure* Carniolans, nor will it make them breed so as to be uniform in color and qualities. Such points can only come after a good many generations have been bred under constant and careful selection.

The writer, on page 80, AMERICAN APICULTURIST, for May, 1892, is further quite mistaken when he says that at the time my article from which he has quoted was printed in the *British Bee Journal* (in 1888) "a great controversy was going on respecting whether bees with yellow bands existed in Carniola." I was a party to the controversy to which it is evident allusion is made, but I did not understand that it was a question as to whether bees with yellow bands existed in Carniola. I had stated in print three years before that such bees existed, and meanwhile many bee-keepers had received similar bees from Carniola itself. I had then been residing in Carniola for some time and had reaffirmed my earlier statement that yellow banded bees were scattered through the province, and had given what I considered good evidence that they were there long before I set foot in Europe. I believe I am familiar with all that has been written respecting Carniolan bees, and feel safe therefore in saying that no record of such a controversy has ever been made.

A controversy did exist, however, and was one brought on by the accusation put upon me of having introduced Eastern bees into Carniola, and having thereby disseminated yellow blood in Carniola. I could have given much more testimony than I did concerning the matter, but my opposers, with an arrogance born only of their own ignorance and the assumption that the public knew nothing about Carniola or the Carniolans, made positive and absurd statements regarding points they knew nothing of, and grew personal and even abusive. Thereupon the editor of the *British Bee Journal* closed the discussion without awaiting from me a reply to the unjust imputations which one correspondent of the *Journal* had hastily made, although he doubtless knew that I would not deign to reply in as discourteous a manner. I do not, however, think the whole matter has been permanently dropped, but, like many other unpleasant things brought upon me by earnest, though (as I have long felt) inadequately rewarded efforts to introduce valuable foreign races of bees and develop the sending of the same on long journeys by mail, it will some day be set right. FRANK BENTON.

Washington, D. C.

ARTIFICIAL FERTILIZATION.

In the Report of the Commissioner of Agriculture for the year 1885, on pages 341 and 342, I notice quite an interesting description of some experiments in the line of the artificial fertilization of virgin queens. With your permission I quote the following from the report of the Entomologist:

"When the virgin queen was six days old orgasm occurred and on the evening of the seventh day we removed her from the hive and placed drops of the male sperm upon the open vulva as she was held back downwards, by gently grasping the thorax between the thumb and forefinger . . . The male sperm was pressed from the testes and seminal sack of a mature drone . . . . . As much seminal fluid as could be obtained, by the imperfect method employed, from three or four drones, was utilized and readily absorbed by the queen, after which her wings were clipped and she was dropped on a frame covered with bees and returned to the hive, and the bees were liberated. Up to this time

her appearance and action were that of a virgin queen. The next morning, twelve hours after exposure to the seminal fluid, her abdomen was distended and her appearance and action in all respects was that common to fertile, laying queens. She was moving about slowly over the combs and peering into the cells, and in twenty-four hours afterward she had 400 or 500 eggs in worker cells. We watched the development of larvæ from those eggs. In due time worker larvæ appeared, and at this date, November 13, worker bees in considerable numbers are being hatched. We then reared two queens from the eggs laid by this artificial fecundated queen, in queenless colonies, and as soon as they were hatched I clipped their wings, and when orgasm appeared they were treated as before described, and in three days one laid a few eggs in worker cells. The other has the appearance and action of a fertile queen, but has laid no eggs and the lateness of the season forbids advantageous continuance of the experiments . . . . . We can confidently assert that fecundation by the natural method did *not* take place."

Not seeing anything of the kind mentioned in A. I. Root's A B C the question arises (for myself—as well as for others, no doubt): Have further tests been made in said direction? If so, have they been a success or not? If not, do not "failures precede successes" and should the trials not be continued? For, if success could be secured, I hardly need explain why and how this would be a great thing for the beekeeping fraternity.

The "Hallamshire Bee-Keeper", in a letter to *Gleanings*, remarks that, in order to produce purely mated Punic queens, he is "also arranging for the exclusive use of an island in the Atlantic" —he could spare himself this trouble if virgin queens could be artificially fertilized.

In the Api, on page 83, I notice the following: "The plans of these beekeepers who expected to rear large bees by cross-mating the smaller races with the *Apis dorsata* are upset as it is understood that the queens of this "coming bee" mate with their drones in the evening." Well, if the latter be so, (but the mating could be done artificially), those plans would not be upset by any means and we could look forward for quite a number of highly interesting experiments.

By the way, the "Hallamshire Bee-Keeper" speaks of the "Kohler system" of having virgins fecundated. Can you tell us what this is?

CHAS. NORMAN.

St. Petersburg, Fla.

The Kohler system of fertilization was to confine both queens and drones in the hive till after all other drones were done flying. Such a plan cannot be considered practical.—ED.].

ARTIFICIAL QUEEN-REARING.

I see a great deal said in the various bee journals in favor of queens reared during the swarming impulse, and various admonitions to let nature take its course. Now, I am an enthusiastic lover of nature, but I am well aware that if I allow my bees to follow nature or their instinct, that I should have very few bees left and should have to go to the woods for honey. Now, I much prefer to rear all my queens by the artificial method, then I know exactly the pedigree and can control the line of descent of her royal highness the queen, if I cannot of her consort, the drone. I have over one hundred colonies and of that number only three come up to the standard from which I would like to rear my queens. I rear all my queens after the method described by H. Alley in *Gleanings*, if I am not mistaken, some years ago. I rear about one hundred a year to re-queen my apiary, as I do not find that it pays to keep queens over the second winter as they rear too many drones, and I do not think that they winter as well as bees from vigorous young queens. Now, if I attempt to

rear all those queens during the swarming period, I should have to keep over a hundred nuclei instead of thirty as I now do. Now those three from which I wish to rear cast no swarms this season, so there are no cells from them by the natural method. Now I am aware that if this article is published, and any notice taken of it, somebody will jump on me with both feet. An advertisement headed queens reared during the natural swarming impulse looks *mighty well*,— has a booming sound, so to speak, and is a heavy weight in an argument in a bee paper. But I hereby forecast my argument that I am not in the queen rearing business for market and run my apiary for the money there is in it, and find by experience that queens reared by the artificial or forced method give the best and most satisfactory results in queen, bees and honey and consequently dollars and cents.

Dr. A. W. Tufts.

Mussom, La.

PRODUCING BETTER BEES.

I have been quite interested in Mr. Giles suggestions about obtaining a better bee, by crossing some of the different races or varieties now known to us.

The so-called Punic or African bee, if it possesses, even a part of the good qualities ascribed to it, might perhaps be crossed in the Italians, so as to give us substantially a new variety, having the desirable qualities of both its parent races.

What friend of the Italians would not be overjoyed if he could give to them, the same readiness (I might even say eagerness) for working in supers, so characteristic of the black or German bee—and the same power of sealing over their honey with such exquisitely white cappings? Yet nothing of this kind has been brought to pass, in spite of innumerable crossings between the two races.

Those who have read my observations on the only colony of Punic bees I have yet seen, know that I certainly found in them some peculiarities which do not belong to the common black race—and I would advise those who have crosses between the yellow varieties and these bees, to give them the closest attention.

I cannot agree with friend Giles that there is any promising outlook for breeding a race of stingless bees. Rats, mice and most of the vermin race love honey — so do birds of various kinds—and bipeds of the human kind are often tempted to steal it.

Now what defence could such a puny insect as a honey bee make against the vast hosts of its sweet-loving enemies, if it had not such a formidable weapon as its venomous sting?

A little time spent upon pondering this question would soon satisfy any one that we are never likely to see a stingless race of honey bees.

L. L. Langstroth.

Dayton, Ohio.

A GRAND SUCCESS

Mr. Alley :—Your last Swarm-hiver has been a grand success this time. A swarm came off one of my colonies this morning at 9 o'clock; the swarmer caught the swarm, the queen going on to the comb. I went according to your directions and had no difficulty in hiving the bees. This swarmer in my mind is the best you have brought before bee-keepers.

July 11. The swarmer has caught another swarm. It is a grand success. You may feel proud of this invention.

Charles W. Dickson.

Stellarton, Nova Scotia.

ONLY TWELVE DEAD BEES.

Mr. Alley :—The golden Carniolan queen I got of you in 1891, wintered perfectly. Twelve dead bees were all I could find in the cellar, after the colony had been in six months. The bees are very handsome. Rod. McLean.

Hopewell, N. S.

MEETS HIS EXPECTATIONS.

MR HENRY ALLEY:—Your new Self-hiver meets my most sanguine expectations. It seems to be a success in hiving swarms. It is rightly named "Perfection self-hiver." The bees come out while the queen and drones cannot get through; they find their way up through the cones into the upper story, and are trapped; when the bees after a fruitless search for their queen, return and cluster in the box around the caged queen, apparently as well satisfied as if they were in a real hive, and the queen with them. Would it not be a good plan to fill the hiver with combs, provided the combs fitted your hive?

Yours truly,

Ludlow, Vt. A. P. FLETCHER.

No, it would not be a good idea to place too many combs in the box set to catch the bees. If the box is full of combs, the bees would most likely cluster there, and work in the box instead of the sections. In such a case they would not swarm, nor work in the sections. It should not be forgotten that the box is designed to catch a swarm in case one issues, and no inducement should be offered the bees to cluster and work in the box.—ED.]

CURRANT WORMS—LOOK OUT!

Day before yesterday I was showing Mrs. Root our great thrifty gooseberry bushes, loaded with fruit, and I pointed to the fact that not a currant worm had as yet made its appearance. Just 48 hours after two large fine bushes were stripped of their leaves, so that nothing but the green fruit hung from bare poles. For a while I was pretty nearly as mad as a Christian has any right to be. Didn't I dust those fellows with hellebore! and then didn't I make huge resolutions that I would watch my gooseberry and currant bushes *every* day instead of every *other* day! You see, these fellows live over winter in the ground. They got pretty bad last fall when I was sick, and so I had not watched for them. But I presume the weather had kept them back until the conditions were just right, and then they just "went in" for my choice gooseberries. Now, remember, you have had a fair warning. A stitch in time certainly saves nine.

A. I. R. in *Gleanings.*

These blasted worms are bound to strip our currant bushes of all leaves each year. We do not *dust* with hellebore, however. It is mixed with water and the bushes sprinkled. In a few hours thereafter every "varmint" will have disappeared.

See here, Brother R., do you mean to say the worms live in the ground over winter and reappear in the spring? The worm goes into the ground; in the spring a fly comes out, lays eggs, and more worms appear.—ED.].

PUNIC BEES AND MR. T. W. COWAN.

In the B. B. J. for June 16th, page 229, the editors say, "None of these bees are now being imported into this country, and as it is more than twelve months since any have been sent over . . . . we very much doubt if there is any beekeeper in this country who has a pure queen, and if there happens to be such a queen she must be pretty aged."

All queens imported last year were young ones—*i.e.*, reared in 1891. Now, according to Mr. Cowan, a queen is at her best during her second year. None of the queens imported last year are more than fifteen months old, and if this means "pretty aged" for queens, I do not know what an "aged" queen is.

Another fact. There are quite a number of stocks both in this country and in America headed with imported queens, and if anyone will pay the price I can fill an order by return of post for twenty imported queens, to say nothing of pure mated home reared ones.

Another fact. I have imported queens of this race since twelve months ago, in fact I have imported over thirty queens since the time stated "any have been sent over."

"Imported" queens are being advertised and offered for sale at the present time, and have been all the season; and the reason they are not advertised in Mr. Cowan's papers is, because when I sent him the advertisement to stand all the season, and the money to pay for it, both were returned simply "declined."

This fact is of more weight than any argument.

Punic bees are taking with a vengeance. They are now in nearly every country, and every post brings in flattering reports. They were swarming a month before the natives, and filling supers long before any others. I met a clergyman to-day—the Rev. George Shipton of Brampton, near Chesterfield. He said his Punics had filled their sections, but unfortunately the weather changed before they got them all sealed over. He has tried nearly all races, and now he is going in for Punics, and I can name many more like him. They will be imported as wanted, and I intend to keep up their supply, as undoubtedly they are the bees of the future. Mr. Cowan may deter many from trying them for a time, but they will eventually prevail, and opposition stimulates inquiry. He says he has come back from Tunis, and "that, though he made the most careful investigations, he failed to find any of the so-called Punic bees." Quite likely. It will be remembered that Mr. Cowan carefully investigated the June *Record* for a paragraph now historical, and failed to find it, in the same manner as he failed to find the Punic bees; but I found both.—A Hallamshire Bee-keeper.

WHAT THE ROOTS THINK OF THE PUNICS.

Our Punics are doing no better in honey—indeed, we doubt whether they are doing as well—as the average colony of Italians of equal strength: and, with the exception of the Cyprians, they are the *meanest* bees we ever brought into the apiary. July 4th we wanted to show A. I. R. the new race. He at once suggested that we open the hive without smoke, which we did, perhaps a little unceremoniously. The air was immediately filled with hundreds of mad bees; and so persistent were they that *we* gladly ran for a veil and smoker, although A. I. R., true to his aversion for bee-veils, crouched down under a sheltering grapevine, with his hands up to his face. We then smoked the bees, but they boiled all over, about as bad as black bees: and, like black bees, they would hold themselves suspended on the wing, perfectly motionless, apparently, with the exception of the wings, right before the eyes, in a tantalizing way. By the way, we would prefer to be stung, and done with it, than to be held in constant fear of it. The next day one of our boys attempted to run a lawn-mower some few rods away from the Punic colony; but he was very glad to put on a veil, and even then the little scamps pestered his hands. When Mr. Langstroth was here, and shortly after, we took every precaution to keep the bees quiet, or, at least, not to arouse them unnecessarily, for we did not wish to test the temper of a new race of bees in the presence of one to whom, at his advanced age, stings might be next thing to serious. The bees were also younger when he was here, and, of course, gentler. Now that they are two or three weeks older, they are regular little demons, unless handled carefully. We should state this, however, that they delight more in bluster and angry buzzing than in actual stings.

In our last issue we stated that they were the worst bees for depositing propolis we ever saw. For example, we have a crate of sections on their hive; and even before there was an ounce of honey put in them (there is not more than a few ounces now in the whole crate) these Punics be-meared the sections all around the edges in six days in a way that is worse than any hybrids ever thought of doing in six months. If our Punics are a fair sample, we do not see how any one can regard them as gentle; and more and more they are beginning to show the regular characteristics of the common black bee.—*Gleanings.*

Very good, friend Root. When I first ran over the above I thought it was as bad as could be said of the Punics. Now if any one knows of a better way to make bees "mad" or to enrage them, just speak up loud enough for all to hear. The above should not be considered a fair test of the disposition of the Punics. There is not a colony of any race of bees that would not behave as badly as the Punics under similar circumstances. So far as using large amounts of propolis, will say that they are no worse with me than other bees. By the way, friend R., why don't you use a section crate so constructed that the Punics or no others can soil the sections?

One or two questions, friend R., and I will drop the Punics for awhile.

Have you any bees in your apiary that would not sting you worse than the

Punics did under the same conditions? Do you consider the test you made of their dispositions a fair or a proper one? Do you recommend your readers to handle bees in that way?

Mr. Ernest Root thinks I am pressing the claims of the Punics most too hard. I believe the Roots are telling the truth when giving their experiences with these bees. On the other hand, I am telling nothing but the truth when I give my experience. At any rate, the reader will soon get my side of the question thoroughly substantiated.

Friend Root has a letter in his possession from a man in California that will open his eyes. The same will appear in Sept. Api. It gives a glowing account of the Punic bees.

There are about seven hundred Punic queens scattered over the country. Of these number of queens about a dozen (will say a dozen though I don't know that there are half as many) that have proved not just as expected. What is there remarkable in that? It is a better record than can be given of any other race. The Punics will come to the front. Mark my words and stick a pin in here.

I do not propose to give the Punics a bad name because T. W. Cowan, D. A. Jones, and A. I. Root have. I think my opinion entitled to as much consideration as any of those of the above-named gentlemen.

THOMAS WM. COWAN.

Editor Cowan of the *B. B. Journal*, travelled all the way from London to Africa in search of Punic bees, and reports that he found none. Nothing remarkable in that. Sometime within a year he looked over a certain issue of his bee-paper to find an item relating to Punic bees. He failed (?) to find it though no one else had the least trouble in doing so. None are so blind as those who will not see.

The editors comments on Mr. Benton's article will appear in Sept., Api.

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Please find some friend who will send in his subscription with yours.

Gleanings says, editorially, "Whatever may have been our position we recognize, and are glad to encourage, all useful patented inventions."

No one can find any fault with you on this point, friend Root.

On Saturday July 16, there were 20 as fine, large and well developed yellow Carniolan queens mailed from the B. S. Apiary as ever were reared by any one.

Three of these queens went to Mrs. L. C. Axtell, Roseville, Ill., and six to Dr. H. J. Ashley, Machias, N. Y. I will be glad to get reports from all who received them.

A man by the name of Trego wrote a friend of ours that he soon intends to say something "that will make that Punic Man squirm." Well, this man Trego is one of those fellows who has had a hand in a sympathetic way, if in no other, in trying to drive that man Alley out the bee business. Let me say to those fellows, that Alley was first in the field as a queen rearer, and he may be one of the last, as in my long experience, I have seen hundreds start in the queen rearing business, run a year or so, and then disappear. Lots of you croakers will be laid away on the shelf for want of business, before the writer is. Where are most of those chaps who two years ago commenced to call me a fraud and humbug?

Gone from the public eye as supply and queen dealers. This giving away a bushel of potatoes worth 50 cents in order to sell a man a queen worth 25 cents has played out.

In Doolittle's plan of having artificial queen cells accepted in an upper story with a laying queen in the lower story, see that the cells are well supplied with royal jelly (taken from other queen cells) before the larvæ are transferred, that there is a comb of unsealed larvæ each side of the cell cups and that the bees are fed liberally if no honey is coming. Doolittle gives these cautions in, *Gleanings*.

It seems to me this is pretty fussy. Why not rear queens by a method that does not require one to pay any attention to "royal jelly?" Just as good queens can be reared without so much useless fuss, as with it.

Years ago I was foolish enough to think I knew all there was worth knowing about queen rearing. I have found, that though I have been working in one special branch of Apiculture more than thirty years, I am yet in the novice department so far as knowing the best methods for rearing queens.

Within a month I have discovered by actual experiment methods far superior to all the ways now practised by our leading queen dealers.

By the old methods of queen-rearing used by me, bees have been made queenless and confined several hours in a box before eggs were given them from which they were to build cells. By such a plan many colonies were so damaged, especially late in the summer, that they were unfit to stand the rigors of a hard winter. This has been the most serious drawback to "artificial" queen rearing.

Now, by new and improved methods no bees are removed from the hives, nor are the colonies used in rearing queens at any season in the least injured. In fact, after the nucleus colonies are formed, the expense for bees is merely nothing so far as building the cells is concerned; colonies can be used all the season in queen rearing, and when fall comes, they will be found in far better condition then they would have been had they not been used for such a purpose.

I am not yet ready to give the public the details of this new method of queen rearing.

Should I do so, no doubt some half dozen enterprising fellows would jump up and say "Oh! we have practised the same thing for years." Don't forget, friends, that we have all your plans and methods recorded in your works, pamphlets, etc. You can't get back of the records you have made. Up to date no one has in any way intimated that my new method is known to anyone, nor do I think it is. I am sure there will be a saving of hundreds of dollars to me in bees and time each season.

Although this seems the most important discovery yet made in queen rearing, I shall continue to experiment as usual.

I believe Mr. Doolittle claims that first-class queens can be reared in a brood chamber with plenty of brood placed over bees having a fertile queen. So they can. I have thought that such a method was the best, and it was till a much better one was discovered. I am now knowing to the fact that better queens can be reared in hives that have

no brood in the brood-nest, but plenty of young bees.

Self-hivers placed in front of the o'd hive in such a manner that the working bees pass through the hiver while on their way to and from the hive, give promise of catching full swarms. The trouble with the old kind is that many of the bees return to the old entrance.—*Review.*

Reports of the Punics are both favorable and otherwise. This was to be expected.

I wish all those who have received and introduced the Punics would give their experience with them for the Api, in as few words as possible. It matters not whether the reports are favorable or otherwise; I want them.

English beekeepers speak much more favorably of Punic bees than American beekeepers. I am ready to stand by the following statement. They are gentle, queens very prolific, bees very industrious and superior honey gatherers; they do not sting, bite or kick. The only trouble seems to be, as with the "—— nigger," they are black. Ninety out of every hundred who introduce the Punics will like them. They are the best imported race that have come into this country. I am ready to sink or swim on this statement.

Those who have any unfavorable reports of the Punic bees will please send them to the *Canadian Bee Journal.* Favorable reports are not wanted by that paper. One thing about it, that paper has so small a circulation that whatever they say will not count much. We have sent lots of Punic queens into Canada, yet not an unfavorable report of them has come to hand from that country. How's that, Mr. *C. B. J?*

Order one or more golden Carniolan queens.

That a fair crop of good honey will be taken this year no one doubts. I am sure more was produced in our apiary than for many years.

How to keep honey after being taken from the hive, was given in a late issue of the Api. Examine your back copies for the desired information.

Considerable space in this issue is taken up in the discussion of Punic bees and self-hivers. Both these subjects are of vast importance to a large majority of beekeepers. We now have had our say, and but little more will be said in future in the Api concerning these subjects.

A long article may be found in a recent issue of *Gleanings* under the head of "cranks." We are all more or less cranky; sort o'crazy; that is, let some people tell it. In my day, I have heard several prominent beekeepers called insane. There seems to be a method in some people's insanity.

A WORD ABOUT SELF-HIVERS.

Since the last issue of the Api, about twenty self-hivers of our latest pattern have been shipped to beekeepers in various parts of the country, to test. Up to date, July 13, but three reports have come in, and I need not say they are favorable When I said I would pay $5 for every swarm the hiver failed to self-hive, no idle talk was intended. The hiver, as now constructed, will not fail to hive any swarm that issues through it. This is the only device that has hived every swarm, as reports of some others have been unfavorable. There is not an objectionable feature about the present hiver. It is easily and quickly placed in position to catch a swarm, and if properly cared for will last a life time.

Bear in mind that this self hiver is the only one that catches and destroys all drones; this is a feature that should

not be overlooked. Here is a point that should interest all purchasers of self-hivers and drone-traps. As far as I am able to judge, all swarmers now in use are an infringement of my drone-trap, or of the self-hiver patented 1890. As soon as the heavy work of the season is over, I shall look after some of those who are now infringing my rights.

In speaking of self-hivers in *Gleanings* of July 1, the editor says I condemned certain parts of the Pratt swarmer, and then adopted them. This is not correct, friend Root. If you will show that I have adopted any part of the Pratt swarmer, or any other persons', I will go out of the "swarmer" business, and leave the whole field to other parties. On the contrary, I can show that all those who are now claiming they have invented self hivers, have adopted the main and principal features of my invention, and, after attaching a lot of useless fixtures and clap-trap to them, claim the whole thing as their own. The parts of the Pratt swarmer that I condemned in a late issue of the *Gleanings*, I still condemn. By the way, friend Root, if I was not correct in condemning certain parts of the Pratt swarmer, why did you and Pratt at once discontinue their use and make a radical change in the whole arrangement? Please reply. I notice you do not use them as first illustrated in *Gleanings* some months ago, and I understand you do not like that way, either.

I do not believe any swarmer is practical where the bees are compelled to pass through two rows of perforated metal every time they go in and out the hive, in order to reach their combs; that is the thing I condemned. One piece of metal is bad enough, we all know.

I am ready to send my swarmer to any person competent to test it in comparison with any other in use. If mine does not prove to be the better and more practical in all respects, let those who test them say so.

Try our five-banded Italians.

One man who has adopted my drone-trap and placed it between two hives for catching swarms, claims that *his* is the *best* swarmer presented to the public. Yet in the same article he also says his swarmer will catch only a few of the bees, and remarks that those who claim they have a swarming device that will catch and hive *all* the bees that issue with a swarm, should be investigated.

All right, my friend, I am ready to be investigated, and to have the swarmer investigated, also. I make you the same offer of $5, Mr. Dibble, that I made others in the July API. If my swarmer fails to catch any swarm and all the bees that issue, the $5 is yours. Come on with your investigation.

It requires a good deal of cheek for a man to claim the best swarming device, and in the same breath acknowledge that it will not hive a swarm. Why, Mr. Dibble, how much better is your drone-trap as a self-hiver than the drone-trap I have sold and also been using for years? My trap has never failed to catch the queen when a swarm issued, as well as at least a quart of bees, or as many bees as the trap would hold. Make the trap larger, friend D, and you will catch all the bees that issue with the swarm. That is how we do it.

Will say to those to whom swarmers were sent for trial, that I was obliged to go to a common box factory for the material used in them, except the queen-trap part. That accounts for the coarse material used in their construction. I shall soon get time to saw them out myself, and shall have swarmers that will do the manufacturer credit.

C. H. Dibbern, Milan, Ill., who has been working over my swarm hiver a long time says he expects by another year to get it so it will catch swarms. I think I have seen the same statement by Bro. D., a good many times within a year, and also that he had perfected one that never had failed to hive any swarm. Later on he owned up to the fact, that it

caught only about a pint of bees and the queen. That's what the trap has always done, friend D.

Well, I have not got to promise the readers of the Api that I "*expect* to perfect mine by another" year; it is here. It has been thoroughly tested, and has not failed even in one instance to catch and self-hive the entire *swarm*, too.

Bro. D. says I have changed around considerably on my swarmer; yes, and so has Bro. D., done his best to change as often as I have.

In a recent issue of the *Western Plowman* Mr. Dibbern says:—

After carefully considering all the various devices so far presented, we have come to the conclusion, that for running an out-apiary, that can be visited but one day in four or five, there is nothing that suits us so well as the plan we used so successfully last year. We shall change it somewhat, using but two rows of perforations at the bottom, and wire-cloth for balance of frame. The lower part will be made large enough to cover the front of the hive and one case. There will also be a double row of perforations at the top of the frame, so that some bees will work through the upper part of the swarmer, before the swarm occupies the upper hive. The object gained is this:

When the bees swarm, the two rows of perforations will not afford room for the rush, and many bees will run up the wire-cloth and pass out through that part. When the swarm returns, they will soon clog the lower entrance, and as the queen is in the upper part, and fully one-half the bees will run up the wire-cloth, and unite with the new swarm. Put it down that this is a new idea, original with me, and from past experience I know it will work. We shall try the other plans also.

Although this is the very principle I have been working on for several years, I cheerfully concede to Mr. D — all the credit he desires as the originator of the above idea. I know it has not and will not work in all cases either in Mr. Dibbern's apiary nor in my own.

The swarmer that does work successfully has a large and very free entrance. The correct principle that should be applied to a practical hiver is the one that will locate the queen some distance from the entrance to the hive, yet so near that when the bees return in search of their queen they will quickly find and cluster about her. This is the principle applied to our new swarmer, and it is proving a grand success.

In *Stray Straws*, in the present number, Dr. Miller wants to know whether it is the thorax of the abdomen that prevents the queen from going through the zinc. It is both; but more the abdomen than the thorax, and that is the reason why an occasional virgin queen will go through, when, after she begins laying, she will fail to do so, so says the editor of "*Gleanings*."

Brother Root you are wrong. I am sure it is the thorax that prevents a queen from getting through the metal. I have always noticed when a queen got her thorax through she was out and on the wing in a jiffy.—ED.]

How would it do to put the bees in the cellar during the flow of "bug juice"? They might die in the cellar, and surely will die if compelled to winter on "bug juice" honey.

A long article from Frank Benton on "Yellow Bees in Carniola" will be found on page 117. Mr. B., owns up that the quotations taken from the B. B. J., and which were given in a recent issue of the API are in the main correct. This is a valuable acknowledgment so far as it concerns us, but what will those fellows do who have all the while declared there are no yellow-banded bees in Carniola?

I know nothing about how yellow-banded bees came in Carniola, yet I do know that it is an easy matter to produce such from the dark strains Mr. Benton has sent us.

In reply to those who have inquired for the price of the Perfection Self-hiver will say that a sample is shipped by express for $1.00.

THE GOLDEN CARNIOLANS.

This race of bees seems to be giving good satisfaction. Of the four hundred and more golden Carniolans shipped in the season of 1891, as yet not one unfavorable report has been received of them. They are a large, beautiful, industrious and docile strain of bees. Even this year, I am selling two golden Carniolan queens to all others, including the Punics.

I shall rear about 600 more golden Carniolan queens for sale the present season. In order to give all a chance to try them, the price will be as follows the balance of the season:

One queen, by mail,	$1.25
One queen and the APIST, 1 yr.,	1.50
Six queens,	6.00
Twelve queens,	11.00

These queens shall be large, of a beautiful golden color; worker progeny well marked and very handsome; in fact I guarantee these queens to be perfect and satisfactory in all respects.

I shall be prepared Aug. 5 to ship promptly by return mail.

Those who desire to try these bees can do so by sending us orders as per prices. Prices of queens producing five-banded bees and queens reared from our famous strain of Italians, will remain the same as given in price list. Now is a good time to requeen your colonies having old queens.

Now, in order to introduce the Punics and give all a chance to test them, I will fill orders for the balance of the season at $1 each. There is likely to be a big demand for these queens, at this price, and in order not to be called a swindler and fraud if orders are not filled by return mail, will state here so that all will understand, that all orders will be filled in rotation, and as promptly as possible.

Furthermore, I guarantee that all these queens shall be mated to pure Punic drones, but I will not guarantee that all will produce typical Punic bees.

I have found that it is a very hard matter to produce absolutely pure Punic queens. There will be a few yellow banded bees from a majority of the queens. This will do no harm.

I ship you these queens at one dollar each, and you must take your chances as to purity. If there is any other trouble with the queens I will replace them, as I guarantee everything satisfactory but purity.

If anyone desires to examine one of our new drone-traps, the same as is used in the perfection self-hiver, one will be mailed on the receipt of sixty-five cents. If desirable to use as a self-hiver, just make a box as per description in July APIST. I want every reader of the APIST to use one of these traps. If not entirely satisfactory, the money paid for them will be returned.

If any reader of the APIST desires to examine my self-hiver, as well as a drone-trap that will catch and destroy all drones as soon as they attempt to leave the hive, send $1.50 and get both the above by express. Bear in mind that the trap used in this swarmer can be used in the self-hiver, or separately as a drone-trap. This is a feature no other swarmer possesses.

If you desire to test our Italians, yellow Carniolans and Punic bees, one queen of each race will be sent for $3, and the APIST for one year besides. Now here is more for the small sum of $3 than can be had of any other dealer in the world.

THE BEST OF SATISFACTION.

MR. ALLEY:—The queen you sent me last year gave me the best of satisfaction, and I am still using one of her daughters for my breeding queen. Please mail two more queens. B. W. LAW.

Havana, Cuba.

ADVERTISEMENTS.

I have prepared an illustrated circular which will be mailed free to all who desire my Italian, golden Carniolan and Punic queens. Punic queens reared from imported mothers only. Prices of hives, smokers, drone-traps, automatic swarmers, foundation, and in fact of all necessary articles used in the apiary given in my list.—HENRY E. ALLEY, *Wenham, Mass.*

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sells queens and bees at the following low prices: Untested Queens before June 1st at $1.00, or $10 per dozen; after June 1st, 75 cts. each or $8 per dozen. Tested Queens before June 1st, $1.50 or $15 per doz; after June 1st, $1 each or $10 per doz. Three frame nuclei and Untested Queen, $2.00. Two frame nuclei and Untested Queen,

$1.50. Full colonies, $6 before June 1st; after $5 (in Langstroth hives.) My bees are bred from the best blood procurable in this country, 3 and 5 banded Italians. If Queens from imported mothers are wanted it must be stated in the order, otherwise American bred stock will be sent

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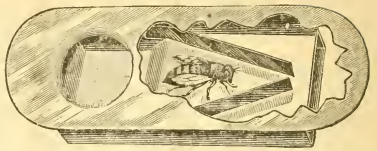

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THE AMERICAN APICULTURIST.

A Journal Devoted to Practical Beekeeping.

VOL. X. SEPTEMBER, 1892. No. 9.

THE COMING BEE—AGAIN.

In the August number of the APICULTURIST Rev. Mr. Langstroth in criticising my article which appeared in the July number, says:— "I cannot agree with friend Giles that there is any promising outlook for breeding a race of stingless bees. Rats, mice and most of the vermin race love honey—so do birds of various kinds —and bipeds of the human kind are often tempted to steal it.

Now what defence could such a puny insect as a honey bee make against the vast hosts of its sweet-loving enemies if it had not such a formidable weapon as its venomous sting?"

This criticism is a very reasonable one, for it is hard to understand how a stingless race of bees can maintain its ground against the attacks of its enemies. But if we can believe the accounts published in the books (and I see no reason to doubt the statements, because they are evidently made by careful observers) such races do exist in South America in spite of the enemies which I should suppose would be as numerous in the hot climate in which they are found as they would be in our cooler climate. Moreover a domesticated bee or a domesticated animal of any kind does not require the same means of defence which a wild animal of the same species requires. For example—the wild boar is provided with powerful tusks, which are merely the canine teeth enormously developed, but in the domestic hog these tusks have been reduced in size by breeding, because they are no longer required for the purpose of defence. As to the mice which Mr. Langstroth mentions as enemies of bees particularly to be dreaded, they can be easily kept out of the hives by means of perforated zinc.

In reply to the statement in the APICULTURIST for June (page 83) that "the plans of those beekeepers who expected to rear large bees by cross mating the smaller races with the *Apis dorsata*, are upset, as it is understood that the queens of this 'coming bee' mate with their drones in the evening." I would say that if the bees of India have the habit of flying in the evening, I presume it is due to the fact that in their native country it is too hot for the bees to fly out in the middle of the day. A friend of mine who lived several years in Ceylon told me that the bees there do not go out to gather honey during the hours of intense heat in the middle of the day. It would not be strange if their habits should be altered in our climate. I am inclined to believe that if the drones were reared in the same hives with the queens which were to be fertilized, they would instinctively fly out at the time when the queens were ready for the mating trip.

Even if it should turn out that the drones from India would not fly out at the same time with the queens of our common races, and if the South American drones should have the same habit of flight in the evening, since they also come from a hot climate, there would still be two possible ways of securing a cross between the races. One of these

possible methods is that given in the August number of the APICULTURIST by Mr. Chas. Norman in his quotation from the report of the Commissioner of Agriculture for the year 1885. According to this report the experimenters succeeded in artificially fertilizing the queens by holding the queen in the fingers and placing drops of the seminal fluid of the drones in contact with the vulva of the queens. If this method can be successfully practised, as Mr. Norman remarks, "those plans [for securing a cross between the race] would not be upset, by any means" for it would in that case make not the slightest difference whether the drones fly by night or by day.

But if it should turn out that this method is inpracticable, there is still another way by which it is possible that crosses between the different races may be secured. This method was described by Mr. Langstroth, in his work "On the Honey Bee" and I cannot do better than to quote his words as given on page 469, edition of 1857.

"Dr Donhoff reared, last summer, a worker larva, from a drone egg which he had artificially impregnated. I attempted this experiment in 1852; but to my great disappointment the bees removed or devoured all the eggs thus treated, owing, as I then supposed, to their unwillingness to raise workers in drone cells. By taking a piece of drone comb, in which eggs have just been deposited, and touching some of them with a fine brush dipped in the diluted semen of drones, I believe that queens, workers and drones may by raised from these eggs if the precaution is taken to give them to bees having neither queen nor brood of any kind."

I do not know whether Mr. Langstroth or anyone else has ever repeated this experiment, but if Dr. Donhoff succeeded in the experiment in 1852, others can certainly succeed now.

Perhaps Mr. Langstroth is right in his surmise that the failure of his experiment was due to the fact that the eggs were in drone cells. If that was the case it would be easy to rectify the mistake the next time. Although fertile queens never lay drone eggs in worker cells, yet drone eggs in worker cells can be obtained by using the eggs of a laying worker, or better, probably the eggs of an unfertilized queen. It is well known that if the fertilization of the queen is not accomplished within three weeks, according to Mr. Langstroth, or at the utmost within forty days according to some other authorities, she cannot afterward be fertilized and will lay only drone eggs. Mr. Langstroth mentions a case on page 41 of his work in which a queen which was born with imperfect wings and consequently could not fly out for fertilization, laid drone eggs in worker cells.

The fertilization of the queens could be prevented either by confining the queens to the hive for forty days by means of perforated zinc, or by clipping the wings; or perhaps the best way would be to raise the queens late in the season after the drones are all destroyed. By some one of these methods, queens could be produced to lay drone eggs in worker cells and it seems reasonable to suppose that the bees would be more ready to take care of these eggs if artificially fertilized so as to develop into workers than they would be to take care of workers in drone cells. If any one has heard of other experiments in the artificial fertilization of bees or eggs I hope that the readers of the APICULTURIST may have the benefit of a report. For myself I feel indebted to Mr. Norman for calling attention to the method reported by the Commissioner of Agriculture of which I had never heard before reading his article in the APICULTURIST.

J. EDWARD GILES.

127 East 16th St. New York, August 12, 1892.

—If I remember correctly, the readers of the API have been cautioned not to open a hive in the morning containing a colony of ugly bees. Do all the work on such a colony in the middle of the day, or towards evening.

THE PUNICS.

MR. ALLEY:—Thinking possibly that you would feel some interest in the result of the Punic queens I purchased from you last year I will make a report. The first queen you sent me died; the second was received about Sept. 1st and I had to keep her three days to prepare the hive for her; then introduced her and she went to business at once. The colony was so strong I divided it in latter part of February. The part that had the old queen I sent out to my apiary. The other part I kept at my home in town for queen rearing. The hive that contained the old queen swarmed twice. The first swarm made 75 lbs. of comb honey. The second was a small one and only filled the brood-chamber making no surplus. The old hive after swarming twice gave me 50 lbs. of comb honey. The hive I kept at home was divided into nucleus and after raising and introducing five queens into other hives, I have built it up into two strong colonies for winter. All was done without any feeding.

The average in this apiary of surplus honey for this season is about 20 lbs. to the hive. C. J. PARKER.

Fallbrook, Cal.

NOTES FROM NEBRASKA.

It is August and the rush of June and July is over. To those who properly cared for their bees in the early spring the season has been a very good one. The abundant rains of the spring made a fine crop of white clover, the best ever known here I think. We did not expect much surplus honey till fall; but this year we were agreeably surprised.

My bees have given me between twenty and twenty-five pounds comb honey per colony, on all that have been worked for honey, while those used for increase have more than doubled my number of colonies, spring count. I only wintered one old queen, and replaced her with a southern queen early in the season, so I have had only one swarm by natural swarming. This one came too soon for the self-hiver, but as I expected a second swarm from the hive I thought I should have an opportunity to test it, even if no other colony should swarm; but, alas! for "the best laid plans of men (and women too) and mice,etc.," they didn't swarm the second time, and the other colonies just went on gathering honey as though there were no such thing as swarming in the world. So all I could do with the self-hiver was to use the trap for catching drones.

(My bigger half makes a suggestion, that if I had not caught so many drones I would have had more swarms." What do you think about it?)

I am sure the self-hiver will work all right. It can't do otherwise.

What beekeeper is there that has not been annoyed by having the smoker refuse to start when needed in a hurry, either from want of a suitable fuel, or because the fire was out in the kitchen stove and no coals obtainable? I need not dwell over the details of lost time, and temper wasted, in trying to get up a smudge, but will tell you the way I get out of the scrape.

Take one or two sides of an old section box that has outlived its usefulness in that capacity, split it up fine, light it, put it in the smoker, put in other fuel, and the job is done, as it will seldom go out.

MRS. A. L. HALLENBECK.

Millard, Nebraska.

A SPECIFIC FOR RHEUMATISM.

It is not generally known that a decoction of the common mullein, which grows wild in every part of this country, is a most excellent specific for rheumatism. Among the German people so much confidence is felt in it that many of them use no other remedy for this disease, and it is seldom known to fail. —[St. Louis Globe-Democrat].

(From American Bee Journal, Aug. 11.)

FIVE-BANDED ITALIAN BEES, ETC.

O. FITZALWYN WILKINS.

On page 381 of the *American Bee Journal* for March 17, 1882, is the following query :

"Who was the originator of that strain of Italians known as the 'five-banded golden Italians?'"

I presume no one has laid claim to being the originator, because I have not, as yet, seen any reply to my inquiry in any bee-paper which I take.

I have been "keeping bees" since 1866. and have nearly every year purchased an Italian queen from some one —more from a Massachusetts breeder than any other, because his queens were invariably as he represented them. I have not obtained any queens from that gentleman for several years, for the reason that I am badly afflicted with color blindness, so far as bees are concerned, and cannot see perfectly anything that is not "*golden-to-the-tip.*"

However, I believe in "giving unto Cæsar the things that be Cæsar's," or, in other words, giving "honor to whom honor is due ;" therefore, I will say just here, that three years since, I procured queens from several breeders, none of which produced progeny equal to that of the Massachusetts queen for gentleness and industry. In the month of June, 1890, her "children" stored in one hive 240 pounds of *extracted* honey, being 100 pounds more than either of the others, although I treated all impartially.

Of course, there are many who keep bees for profit, and have realized much larger returns than the above. I remember, "some twenty years ago," one case in which 600 pounds were extracted from one hive ; at least it was so reported in the *American Bee Journal*, Vol. VII, No. 7, for January, 1872, page 164. on the middle of the second column. By the way, what has become of Gallup, "Novice," "Amateur," and a score more of the "old timers?"

Do you know I experience more real pleasure in looking over the first volumes of the AMERICAN BEE JOURNAL than in any other occupation except working among my *yellow* pets?

"Honor to whom honor is due," reminds me that I procured queens last year from four "five-banded breeders" who "satisfaction guaranteed ;" but all of whose queens were not producers of even uniformly three-banded workers. The queens were from breeders in New York, Maryland, Illinois and Missouri, and I expected to obtain some very fine queens from them. Well, Missouri and Maryland furnished queens to fill the bill ; New York's was very poor—she produced two and three-banded bees for a short time, and departed this life after a ten weeks' sojourn in our grand Dominion of Canada ! Like the "summer girls" generally, she was not ready for annexation !

The Illinois queen was very prolific of three-banded workers, and extremely dark drones. The workers had cloudy spots in the bands, also extremely vixenish tempers. I rejoiced "with an exceeding great joy" at her early admission to the halls of Valhalla this spring, where, if she be not sipping nectar from the skulls of her rivals, she is doubtless sharpening her death-dealing brand on the thorax of some vanquished enemy.

The other two queens—from Maryland and Missouri—each produced four and five banded workers, gentle as butterflies (almost), and as industrious as our own Canadian beavers.

The idea advanced in a New York bee-paper, would have, I think, a beneficial effect on those breeders who obtain money under false pretences, viz. : that each apiarian periodical throughout the continent should publish a "blacklist" of all unscrupulous dealers in apiarian supplies.

International Bridge, Ont., July 4.

Well done, friend Wilkins. I have no doubt I am the Massachusetts man referred to by Mr. Wilkins, as it is some two or three years since I mailed a queen to him.

Brother York, editor of the *A. B. J.* could not see it to mention the names of

those parties referred to by Mr. Wilkins. It won't do to do too much free advertising, will it Bro. Y.?

I am unable to say who was the originator of five-banded bees. The first I ever heard of these bees was more than 20 years ago, when Mr. J. E. Pond visited my apiary and was shown them. I was rearing Italians only at that time and Mr. Pond then said that many of those he examined had three, four and some five bands.

I do know that nearly all who have advertised five-banded bees have been supplied with queens from the Bay State Apiary. —ED.]

(From American Bee Journal, Aug. 11.)

THE MATING OF QUEEN-BEES.

S. E. MILLER.

Queries 819 and 820 (pages 668 and 698) are such that may never be accurately answered; nevertheless they are questions of vital importance, and we should do our best to arrive at something as near the facts as possible.

Let us put the question in this shape: If I have only Italian drones, and a neighbor within 1½ miles of my apiary keeps black bees, may I expect to have the greater part of my Italian queens to be purely mated? The best we can do in this matter is only conjecture, and varies, in the minds of leading lights in bee-culture, from one to four miles.

Many believe that drones congregate in great numbers, and that the queens fly among them and find a mate. For my part, I am inclined to believe that the loud noise overhead, that is taken to be a congregation of drones, is nothing more than the workers going to and from a certain field. But admitting that drones do congregate, let me ask what there is in the instinct or nature of a drone that would take him three or four miles from the apiary to meet his comrades; and how does he know just where this "convention" is going to be held, so far from his home? (Have they a "secretary?") Is it not more reasonable to suppose (for supposition is all that we have to go by) that the drones would congregate within a short distance of the apiary, where each drone, after making a few circles about the apiary, will come within hearing of the "officers," and first members of the convention that have arrived, and join them?

But let us imagine that the convention is called to order. The next thing on docket is to make a loud noise to attract the attention of queens that may be out in search of a mate. Now let us go to a hive where there is a virgin queen about five days old. She comes out of the hive, and in all probability this is the first time that she has seen the outside of the hive. Does instinct teach her that in one certain direction some three or four miles away, a great number of drones are congregated awaiting her arrival? How does she know in which direction to go?

Have we any reason to believe that the all-wise Creator should so arrange it that this most important inmate of the hive should endanger her life among rapacious birds and insects by flying so long a distance? Would it not be more reasonable to believe that a queen, when she leaves the hive, makes a series of circles, each time making a larger circle until she comes within hearing of the drones? or, what is more reasonable, meets a drone that is circling about the apiary in a similar manner? Which theory looks the more reasonable? A queen and drone mating two or more miles from any apiary is no evidence to the contrary, as both may be from a tree, or trees, in the woods.

Early in May, in passing through the apiary, I noticed a commotion among the bees in front of a nucleus hive having a queen about five days old. I sat down to watch, and soon saw the queen appear, but could not tell whether she came out of the hive or returned from a flight: I think the former. She took wing, I looked at my watch, and when she returned she had been gone five minutes. She remained a minute or more, and flew away again, and this time was gone only about one minute. This

she repeated once more, and returned without meeting a drone, and went into the hive. The day was cool, and partially cloudy, with the sun shining intermittently, and only a few drones were flying.

Then followed a week or more of weather that bees flew scarcely any, and when a warm day came I witnessed a repetition of what I have described above. This queen finally mated when she was twenty-one days old, and turned out to be a good layer.

Testimony seems to be pretty strong that drones do congregate, but why should we assume that they go three or four miles from the apiary to do so? Some one may say, that is a provision of nature to prevent in-and-in breeding, but I should say that is assuming too much.

Do the *males* of quails and other gregarious fowls go miles away from the covey with which they were reared, to find a mate in pairing time? or do they choose a mate out of the flock they are with?

I should say, keep plenty of Italian drones and no black ones in your own yard, and the greater part of your Italian queens will be purely mated, if there are no black drones reared nearer than two miles from your apiary.

Bluffton, Mo.

An article so full of practical sense as the above seldom appears in any publication. The readers of the API will recognize in the article the same line of argument that we have been using for a good many years.

In our opinion no queens go a half mile to meet a drone; nor do we believe drones go any farther from the apiary than do the queens. We have watched a good many virgin queens leave the hives on the mating trip, and none were absent more than five minutes. Now if any one desires to test the time a drone is absent from the hive, just take a little flour paste, made quite thin, or flour and water, and when the drones come out the hive, daub the backs of a few and see how long they are on the wing and away from home.

It was sometime within a year that D. A. Jones expressed a good deal of sympathy for such fellows as S. E. Miller and ourselves, because we do not believe that queens and drones fly several miles in order to mate.

D. A. Jones once kept his queens on an island, some half dozen miles from all other bees in order to insure pure mating. Did he succeed? Well, we had some of those same queens said to have been mated so far from impure drones; they were far from pure, however.

I claim that half a mile is as good as ten miles so far as pure mating is concerned. Those persons who so persistently hold to their opinions that bees must be kept three or more miles apart to insure purity, and in the face of all evidence to the contrary, are merely cranks and it is not worth the time wasted in discussing the question with them. Mr. Miller is a clear-headed man and should write more for bee-papers. —ED.]

(From American Bee Journal, Aug. 11.)

THE MATING OF QUEEN-BEES.

MRS JENNIE ATCHLEY.

I wish to relate a little circumstance that happened not long since.

I had quite a number of young queens to hatch a few weeks ago, and from among them I confined a lot in the hives for five days, and kept them in the house, feeding them well each night. They had two frames of brood and about one pound of bees each.

On the fifth day I took them to one of my mating yards, 3 miles distant, at about 4 o'clock in the evening. I put them down and opened the entrances as I went, and just as soon as I had all out of the wagon, I went back and adjusted the frames, and to my great surprise every queen had mated and returned. We saw one queen (whose

wings were a little bad, but could fly) that came in very cautiously, and two or three drones followed her right to the entrance. She caught on a weed in front of the hive, and the drones did the same.

Now, it could not have been over 30 minutes from the time I took them out of the wagon until I examined them, and I do not believe it was more than 20 minutes. Drones were flying thick from the drone hives, and I know these queens did not go any 4 miles—not any ½ mile—from the hive to mate, but they were mated right in that yard, not over 2 acres in it. You see, these queens being 5 days old, and having been fed regularly, were crazy to fly, and consequently flew the first chance they had.

Now, could we not confine queens as above, and select the time to turn them loose, while the drones were flying, and have them mated to just the drones we wish? I believe it is worth trying, as these are plain facts and no theory about it.

Floyd, Texas, July 12, 1892.

The above illustrates the Kohler process of mating queens to pure drones. But isn't it a hard nut for those "long distance" fellows to crack? I tell you that those parties who claim that bees will mix even as far as six miles away, will soon find themselves in a hole. Nothing like practical experiments to knock out the noisy theorists.—Ed.]

I GIVE IT UP.

FRIEND ALLEY:

I will say that when I ordered the *Perfection Swarm-hiver* of you, a short time ago, I told you that I had but little confidence in a hiver.

I have just tested it. In it I caught two swarms inside of one hour; it did as you said. One swarm did not alight but returned to the hive after flying around awhile; the others settled for a little while first. I guess that I shall have to give it up and say that it seems to be a good thing, and is well named. So far it works to perfection. W. H. NORTON.

Skowhegan, Me., July 27th.

AMERICAN APICULTURIST

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SPECIAL NOTICE.

THE AMERICAN APICULTURIST is circulated in every county in the United States, and is read by more than 10,000 beekeepers. Edited by a beekeeper of thirty years practical experience.

Subscriptions can commence at any time as each number is complete.

Remittances.—Make money orders payable at the Salem, Mass., P. O. Cashier's checks and American Express Money orders are safe ways to remit. Currency may be sent in Registered Letters. Odd change in small amounts may be sent in one and two cent stamps.

A pencil mark across this indicates that your subscription has expired. Unless you notify us at once that you desire the paper continued, no more copies will be sent to your address. We are ready and willing to continue and wait a reasonable time for pay if the money is not at hand to remit with subscription. Now please attend to this matter at once, or you may forget all about it.

Please find some friend who will send in his subscription with yours.

—The Punics are badly slandered. Almost everything worth having has its natural enemy.

—September is the best month for preparing bees for winter. Don't fuss with them late in the fall.

—Twenty-five pounds of sugar, or $1.25 worth will carry any colony of bees through the hardest winter.

—Bees in the Bay State Apiary have gathered more or less honey all through the summer. Quite an unusual thing.

—Good old father Langstroth seems to be renewing his age, as about all the bee-papers contain something original from his pen.

—A big crop of new bee-papers is promised in the near future. Such things must be expected as long as fools and cranks infest the world with their existence.

—'Tis a hard question to decide whether T. W. Cowan or the Punic bees possess the more vindictive disposition. We can handle the Punics, but cannot do much with Cowan.

—If the editor of the *British Bee Journal* had any disposition to be fair in the discussion of the Punic bee question, he would publish favorable, as well as unfavorable reports of these bees. *Gleanings* is fair and gives both sides.

—That fellow way up in New Hampshire, who is publishing the *White Mountain Apiarist*, has a new set working on his paper. The June issue reached us in the middle of July, and was a marked improvement on all previous copies of that paper sent to this office.

—Don't be in a hurry about marketing your honey. There must have been a short crop of good honey gathered this year. Vermont beekeepers have secured but little surplus, and this seems to be the condition in several states where large quantities of section honey is usually secured.

—In a recent issue of the *Scientific American* can be found the article on "Producing a better bee" from the pen of J. Edward Giles. Articles of real merit only find their way in such a paper is the *Scientific American*. Elsewhere an this issue may be found another interesting article on the same subject by Mr. Giles.

—When those beekeepers who have the Punics learn how to handle them, little complaint will be heard from stings. There is a great knack in handling bees to avoid stings.

Some people cannot handle bees any more than they can the horse, or other domestic animals. The Punics are all right.

—"I never saw such handsome bees," remark all who visit the Bay State Apiary, and are shown the beautiful Italians. Well, these bees are from a queen reared this year, her progeny is so beautifully marked, I shall rear and have ready for mailing, Sept. 1, some over 200 queens. Ten dollars per dozen, $5.50 per half dozen or $1 for one queen is the price these queens can be had for.

—I recently received an order for half a dozen queens by return mail with four days notice. Couldn't do it.

A few days ago an order came for a queen by return mail. The next morning the same customer wrote that I must ship at once or it would be too late for him. The next day word came "it is too late." That is what I call doing business on a rush.

—Brother York, of the *American Bee Journal* gives notice that at present he is not in the supply business. Here's two to one that he'll have to be, or stop issuing the old *A. B. J.*

Nearly all those publishing bee-papers tried the same experiment Brother York is now experiencing; but after a while all had to come down and sell a few fixings used in the apiary.

—'Tis pretty rough to be obliged to write this stuff with the temperature at 92° in the coolest place.

'Tis rough, too, to go into the apiary and put up queens when it is 120°in the sun. We poor mortals who rear queens and publish bee-papers have to do these things as well as a good many more things the common beekeeper is not obliged to do.

—Since the last issue of the Api, the Bay State apiary has been visited by a large number of apiarists. All were well pleased with what they saw. The Punics were shown, yet not one of those vindictive little black cusses offered to sting any one. All who see the Punics here get a good impression of them.

No one was allowed to depart without examining the Perfection Self-hiver; they were admired by all; "we will try them next season" was the promise of every one.

—I have seven full colonies of Punic bees in my apiary and have occasion to pass the hives as many as fifty times on some days. I never have known a Punic bee to fly around my head or offer to sting me on such occasions. My Punic bees never fly or "buzz" around those who visit my apiary.

If Mr. Root, Mr. Langstroth or any person in the world will visit my apiary, and is stung by a Punic bee, or discovers a Punic bee buzzing around his head, I will promise to destroy every colony I have in the yard. The Punics never volunteer an attack.

—Say, you fellow reading this, why don't you ask your beekeeping friends to subscribe for the Api? Just tell them that in the near future one whole number of the Api will be devoted to queen rearing on a new and improved system which is original with us and unknown to any one else. The entire thing will be so illustrated that all can understand and at once put it in practice. Why! that one copy of the Api alone will be worth $10 to any beekeeper. Rearing queens by this new plan will be like husking corn, —anyone can do it.

—I want to tell the readers of the Api about making paste.

In all first class publishing offices like the Api for instance, a good deal of flour paste has to be used. In hot weather, it must be made fresh about every day or it will sour, the flies get in and soon it is full of vermin and throws off a horrid smell. Now all this annoyance is easily prevented. When the flour and water is mixed for the paste, just add a teaspoonful of alum to each quart. It will keep good and sweet for a long time and not a fly will touch it.

—Our foreign beekeeping friends take more interest in bee matters than we Americans. At a convention of beekeepers recently held in New South Wales, there were upwards of one hundred beekeepers present. It is hoped they do not carry their petty jealousies to such places and discuss persons and things personal as is done in some of the conventions held in America. Go to the convention and tell those present what you have discovered that is of advantage to beekeepers generally. Don't say "I ordered a queen of a certain dealer and never got it; or, he sent me a hybrid, a small or an impure queen." Those who do not attend conventions are as honest, fair dealing and as honorable as many of those who do attend.

—Within a year the Api has had two advertisements to which we wish to call particular attention. One of the advertisements in mind ran through a whole year, and the person agreed to pay the price as per contract when the time expired. Up to date he refuses to pay. The advertisement was for a feeder and smoker. The smoker is a very good one, but much better ones in all respects can be purchased for less money, and from those who pay for their advertising. The feeder is a failure, and worthless; in fact, it is so constructed that the syrup leaks out and sets the bees robbing.

—We here take occasion to say that no more "Electric Belts" will be advertised in the Api. The contract for that advertisement was for a year. We cannot advertise for nothing. 'Tis not advisable to send money to above parties.

SAVES WORK.

Mr. Alley:—Enclosed find cash for one Italian queen. I have your drone-trap and it saves me lots of work.

W. S. Simpson.

Fairfield, Maine.

NOTES AND COMMENTS.

By Henry Alley.

The mischief effected by the fertile worker is, says Wm. Ballantine, in *Farm Home*, that the bees appear satisfied with their so-called extemporized queen, and are even hostile to a perfect and fully developed one, stinging her to death whenever she is introduced. They will also tear down and destroy every queen cell that may be introduced. The colony in the meantime will be decreasing in the number of workers, and will finally, if left alone, become a colony of drones, provided there is enough honey in the combs to support them.

The above clearly illustrates the inexperience of the author. Bees that have been queenless a time sufficient to develop fertile workers, will readily accept of either a queen cell, fertile, or a virgin queen. It is a mistake to suppose that but one worker bee deposits eggs in a queenless colony, nearly all the bees have a hand in laying the eggs that produce drones only.

I never have found any trouble in introducing either a queen or cell to such bees; but the trouble is the fertile workers continue to deposit eggs after they have accepted a queen. After a while, however, the queen gets her work in and the colony gradually increases to a full one.

I have sometimes known fertile workers to seize and ball a virgin queen that had been introduced, when she returned from the mating trip.

Bro Alley, says W. Z. Hutchinson, in *Review* for August, has sent me two self-hivers, and each has caught a swarm since their arrival. They will catch the *whole swarm*. There is no mistake about it. The reason is that the bees in leaving and returning to the old hive, in their every day labors, pass through the hiver, and when they swarm the queen is caught near the outer entrance of the hiver, and when the bees return they stay in the hiver with the queen.

I am inclined to the opinion that I was perfectly safe in offering to give $5 in each case where the Perfection Self-hiver failed to hive a swarm.

Mr. Robert Shaw, of Rosemont, Ont., says; "It takes me all my time to control the swarming fever in the apiary."

A few dollars invested in our Perfection Self-hivers would save all such trouble. One of these hivers, containing seven frames, with starters, can be placed at the entrance of a hive and there remain for seven days after it has self-hived a swarm of bees. Of course it must be taken away on the seventh day, as a second swarm is likely to issue on the eighth day after the first swarm comes off, and there would very likely be some confusion should the two swarms hive in the same box.

"I received one of Alley's self-hivers, and not a swarm has gone off since," says Dr. Miller in *Gleanings*.

There must be about a dozen other beekeepers in the same box. Out of about fifteen self-hivers sent out to beekeepers in various parts of the country, but a few of those who have them have made any reports. All reports to hand, however, say they are a grand success.

The Alley traps have done for us good service this year. We bought a number of colonies this year, the drones of which were not select. Upon all such the Alley trap was placed, trapping all undesirable drones. We then encouraged those colonies that had very fine drones, to rear as large a number as possible. *Gleanings, Aug.* 1.

The Alley traps have proved a great success in thousands of apiaries. I have made a great improvement over the old style, and shall be ready by and by to send them out.

Prices will be the same as for the old style trap. One trap by mail, sixty five cents. See our price list for traps in the flat and by the quantity.

"Perhaps some of our readers would like to know how thick top bars are doing as regards presence or absence of barr combs. Some of them have been in use now for three years, and they are perfectly clean to-day as far as spurs of wax are concerned, although they are soiled as a

matter of course with propolis. It is such a comfort to pull off the covers of hives having these frames in! The beekeeper who has tried the two kinds of frames in hives side by side, the old burr comb frame and the non-burr comb, we are sure will declare that he will never, *never* go back to the narrow top bars."—*Gleanings.*

It was several years after the Api informed the beekeeping public that a thick and wide top bar was the proper thing to prevent burr combs before it was adopted by anyone. Don't forget that the thick top-bar had its origin in the Bay State apiary.

THE BEEKEEPING EDITORS are all now on pretty good terms with one another. If there *is* one of them holding a "grudge" against another member of the fraternity, I'll tell him how to get his revenge, if he must have it. Let him keep perfectly still about it, but go quietly to work and so improve his own journal that it will "run out" the other fellow.

How many bee-papers have you squelched in that way Bro. H.? A number have died within a year, but I did not think they were killed by you.

Henry Alley deserves credit for sticking to automatic swarmers all these years, when the most of the rest of us regarded them as not practical. They may not prove to be practical even yet; but the evidence in our yard points that way strongly.—*Gleanings, Aug.* 1.

Yes, Alley stuck to a thing he knew would prove a success. I well knew that a self-hiving device would surely prove practical. The only reason it was not sooner perfected was the fact that I had few or no swarms issued in my apiary.

Alley has stuck to a good many things, and for many years, that some people were slow to adopt. When once tested, they were found to be as I had claimed.

Among the things that are now being adopted by many leading beekeepers are the thick, and wide top bars for brood frames. The first frames of this style were devised and used by me in the Bay State Apiary.

More than twenty years ago I patented a hive having a movable outside, or winter case. I soon found that a case made of $\frac{7}{8}$ boards was unnecessary and boards half that thickness would answer even better than thick ones.

Now one of the largest supply dealers in the country is advertising "Our thin walled hive" for winter. Do they call it the Alley hive? They do not. Nevertheless, it is our style all the same.

EDITOR ALLEY says he tried my plan of raising queen-cells in a lower story, having queen above and quilt between. He failed, and now he wants some one to report success so as to save my credit. Don't worry about my credit, Henry. It's good for what flour and bacon I'll need for a year, and may be I'll get a crop next year.

DR. MILLER.

No doubt you can get all the corn and bacon you need, friend Miller. But can you rear those fine queen cells by the method you gave in *Gleanings?* is the question. You can do more than any one else if you can. When I first read that way of having queen cells built I was alive with enthusiasm. Bro. Pratt was here when I prepared the first hive. "Well," he said, "you won't get any cells." "Get out," says I. Dr. Miller says the thing can be done and what the Dr. says is law, or rather was with me till I tried the plan and failed. After that I lost confidence in the man who writes stray straws for *Gleanings.* Why, I had as much confidence in what the Dr. said as the little boy did in what his mother said. The little fellow was telling his companions what he could do; one of the boys rather doubted him. "Well," said the same boy, "I know it can be done as my mother said so, and when my mother says so it's so if it aint so."

I begin to think it is'nt so as I didn't find it so. Now Dr., don't get mad and throw more corn and bacon around. Keep the stuff till colder weather.

Perhaps some may ask why I print only unfavorable accounts of the Punic bees. It is because I see no other, except those

that come from persons interested in their introduction. W. Z. Hutchinson.

I had occasion to remark in Aug. Api "that none were so blind as those who would not see."

If Bro. Hutchinson was so disposed he could find evidence of the good qualities of the Punics in the same papers from which the unfavorable reports are taken, and they do not come from *interested* parties either.

I am ready to send Bro. Hutchinson reports of the Punics if he will publish them, that cannot be equalled by any other race of bees in the world. Why not give space in *Review* to the one found on page 585, Aug. 1, *Gleanings*, by Mr. I. N. Moore? Mr. Moore has no Punic queens for sale.

FEEDING BEES.

Before this month goes out all bees in the northern States, short of stores, should be fed to insure safe wintering.

Sugar can now be purchased at about five cents per pound. Syrup as a winter food for bees is far more wholesome and safer than much of the fall-gathered honey.

To each ten pounds of sugar add three quarts of cold water, after stirring vigorously for a while let it stand until all is dissolved, then give to the bees.

There are forty or more ways in which the syrup can be given to the bees. For slow feeding use an inverted fruit can, same as is here illustrated. This is a Mason fruit jar. It has a glass cap. Remove the cap and use a tin one in its place. Punch as many awl holes in the tin as will let the syrup through freely. Be sure the cap is so turned down that no air can enter the jar, then invert the jar over a two inch hole in honey-board. For rapid feeding use a pan that will hold from two to five or six quarts. Place the pan in the hive over the bees and cover all with the cap. Put in a few chips, cut straw or anything that will prevent the bees drowning. By this last method a colony can be fed a full winter's supply in less than 48 hours. I usually use one quart of good honey to each ten pounds of sugar. It may be a notion, yet I think the bees like the syrup better, and the honey has a tendency to prevent the sugar granulating.

MR. BENTON'S ARTICLE ON YELLOW CARNIOLAN BEES.

As promised in Aug. Api, I will mildly criticise Mr Benton's article as printed on page 117, concerning yellow bees in Carniola.

Mr. Benton acknowledges that the quotations taken from the *British Bee Journal* and published in the March Api were correct, and I need not discuss that point. Mr. B. does not believe that the yellow bees in upper Carniola are pure Carniolans. It strikes me that the "two intelligent natives" (the brothers Jeglic), are right and that the yellow bees found in Carniola are as likely to be pure as the dark strains. Why shouldn't a native of Carniola know as much about the bees of Carniola as Mr. Benton, who was merely a stranger there? Now supposing some beekeeper comes to this country from Africa, for instance. He makes an extended tour of the country and finds we have black bees, and still blacker bees (Punics), brown bees, three-and five-banded Italians. Now supposing he returns to his native country and asserts that true American bees are all yellow-banded as he found yellow bees in nearly every apiary he visited. Of course we Americans know and would maintain that the African visitor would be wrong in his opinions and conclusions. Now suppose the African claims all the above for the purpose of justifying a previous statement that he thought the Americans did not know the true color of their own bees. Now Mr. Benton will not credit the native beekeepers of Carniola with knowing what the color of their bees are when they assert that the true color of the native

bees of Carniola are yellow-banded. Well, Mr. B. is entitled to his opinion and so are the two "intelligent" bee-keepers of upper Carniola, and they are, in my opinion, more likely to be correct and the better judges as to what is native or foreign to their soil.

Mr. B. says:— "Of course, it would be quite possible to take bees imported from Carniola and produce by constant selection of those on which the yellow was most plainly visible a full banded yellow strain; but I would not call them "yellow Carniolans," for they would owe their origin to an accidental impurity found in Carniola, and would not be bred from typical Carniolans."

What would you call them, if not yellow Carniolans? Are these bees I produced direct from dark Carniolans anything but Carniolans?

The above quotation is the *one* point that pleases me immensely. Mr. Quigley, editor of *Progressive Beekeeper*, Mr. Green of Dayton, Ill., a man who can sling ink better and with more effect than most men who try to do a fellow up, Mr. Lowmaster and Mr. Robinson, are especially invited to comment in the API on what Mr. Benton says in the above.

The gentlemen named have called me a swindler, and a humbug because I claimed I had produced yellow bees from the dark strain Carniolan race and sold them for golden Carniolans. What a controversy would have been saved had Mr. Benton written this same article about two years ago.

"Carnic Italians, or better still, Carno-Italians, would tell more accurately what such bees actually were. If, as has been done thousands of times, hybrid Italians are taken to a locality where only pure blacks (the common, German, or brown bees) exist, the surrounding apiaries, as is well known, will soon show some workers with yellow bands. And any person, understanding the principles of breeding, will readily admit that constant selection of those black or common queens as breeders, whose workers show some yellow, and, the exclusion of drones from all black or common queens whose workers show no yellow, will eventually produce workers as well marked with yellow as any Italian, and this with no further introduction of Italian blood."

Does not this last quotation from Mr. Benton rub the gentlemen above named rather hard? Yes, 'tis true, those men who so unmercifully criticised me for advertising and selling "yellow" Carniolans were ignorant of the correct principles of breeding bees by selection.

But no one would claim that these bees should be called yellow blacks, yellow common bees, yellow German bees, or yellow brown bees.

We can both agree as to calling bees "yellow blacks." etc. If I succeed in breeding yellow bees from native American or the German strains, I would not call them yellow blacks or yellow brown. Would call them "yellow American" or yellow German bees. Would it not be a correct name? Now if yellow bees can be bred from German or the black American races, the only proper name would be "yellow German or yellow American" bees. Would it not sound as well to call them yellow German as brown German bees?

If I can breed a yellow strain of bees from the Punics without making one cross from any other race, should not such a strain be called *yellow* Punics?

The proper name should be derived from the original stock from which the strain was produced or developed. One more quotation from Mr. B. and I am done.

"Permit me a few words about the quotation from Mr. Cowan: "No one—in Europe at any rate—has ever seen or heard of pure Carniolans being yellow." As I do not agree with certain Carniolan breeders, whose opinion I have quoted, that "an occasional tendency towards orange or rusty-red bands was always the case with all Carniolans, but that it was no mark of impurity in the race," it is evident that my views accord with the statement credited to Mr. Cowan, and I fail to see in what way the writer on page 80 of the AMERICAN APICULTURIST has (in that article, at least) shown anything contradictory, unreliable, or incongruous in Mr. Cowan's utterances on this subject."

I fail to see how the above in any way helps Mr. Cowan. Mr. Benton had al-

ready stated in the *B. B. J.* the opinions of the brothers Jeglic that there were yellow banded bees in upper Carniola. The following were the words used:

"These two beekeepers (the brothers Jeglic) say "that orange or rusty-red bands are not a mark of impurity in Carniolans."

Mr. Benton's article was printed just as he wrote it without one word being changed. Although not intended to be of any special advantage to me, it does nevertheless.do me considerable service.

I find not a word in it except Mr. Benton's opinion to disprove the opinion I have given, namely, that the original yellow bees were Carniolans. The line which divides Carniola and Italy is so narrow that in my opinion the Italians did not cross the border into Carniola and establish the yellow bands in "every apiary" in that country. It seems to me the Carniolans crossed over into Italy and gave to the native bees of sunny Italy all the claims they have to yellow bands, etc.

Thanking Mr. B. for his able and interesting article, and with an invitation to come again, I now drop the yellow Carniolan subject.

In order to give all a chance to try our queens the price will be as follows the balance of the season:

One queen by mail,	$1.00
One queen and the API, 1 yr.,	1.50
Six queens,	5.00
Twelve queens,	10.00

These queens shall be large, of a beautiful golden color; worker progeny well marked and very handsome; in fact I guarantee every queen to be perfect and satisfactory in all respects.

I shall be prepared Sept. 1 to ship promptly by return mail.

Those who desire to try Carniolans can do so by sending us orders as per prices. Prices of queens producing five-banded bees and queens reared from our famous strain of Italians, will remain the same as given in above list. Now is a good time to requeen your colonies having old queens.

I have found that it is a very hard matter to produce absolutely pure Punic queens. There will be a few yellow banded bees from a majority of the queens. This will do no harm.

I ship you these queens at one dollar each, and you must take your chances as to purity. If there is any other trouble with the queens I will replace them, as I guarantee everything satisfactory but purity.

If anyone desires to examine one of our new drone-traps, the same as is used in the Perfection self-hiver, one will be mailed on the receipt of sixty-five cents. If desirable to use as a self-hiver, just make a box as per description in July API. I want every reader of the API to use one of these traps. If not entirely satisfactory, the money paid for them will be returned.

If any reader of the API wishes to examine my self-hiver, as well as a drone-trap that will catch and destroy all drones as soon as they attempt to leave the hive, send $1.50 and get both the above by express. Bear in mind that the trap used in this swarmer can be used in the self-hiver, or separately as a drone-trap. This is a feature no other swarmer possesses.

If you care to test our Italian, yellow Carniolan and Punic bees, one queen of each race will be sent for $3, and the API for one year besides. Now here is more for the small sum of $3 than can be had of any other dealer in the world.

GOOD ENOUGH FOR HIM.

Editor AM. API:—In regard to the Punic bees would say that they are the best race of bees I have ever seen, and they are the gentlest Bees I ever handled. I have not had a sting from one of mine yet. I do not use a veil to protect me from the Punics. They are good enough for me.

S. F. SAMPSON.

Ronceverte, W. Va.

ADVERTISEMENTS.

THE PUNICS AHEAD.

MR. HENRY ALLEY: — Punic bees received of you last October are now the best I have, and I am satisfied the Punics are superior to any I have tried. None others compare with them for workers and honey gatherers. I. W. MOORE.

Los Angeles, Cal.

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THE AMERICAN APICULTURIST.

A Journal Devoted to Practical Beekeeping.

VOL. X. OCTOBER, 1892. No. 10.

ARTIFICIAL FERTILIZATION.

In a well written article on "The Coming Bee" in the September number of the Apiculturist, Mr. J. Edward Giles, when treating of artificial fertilization, gives, provided it be practicable, the preference to the mode to which I called attention in the August number of your monthly. By the way, we all know that a queen which lays worker-eggs sometimes changes into a drone-egg-layer. Is not the cause—or one of the causes— of this defect that she was imperfectly fecundated? Well, by the method I mentioned a most thorough fecundation could be effected and the number of those drone-egg-layers very probably be reduced to a minimum.

In case this method should turn out to be impracticable, Mr Giles would take refuge to a way similar to the one described by Mr. Langstroth, who took a piece of *drone* comb, in which eggs had just been deposited, and toucned some of them with a fine brush dipped in the diluted semen of drones. Mr. Langstroth failed in his experiment because—well, both he and Mr. Giles surmise that the eggs should not have been in drone cells. This may have been thus, but would not undiluted semen have been better, perhaps? Or, if diluted semen is good enough, was not the dilution a faulty one? Such experiments are quite intricate things and the least deviation from the right road leads to failure.

Mr. Giles, in order to get drone eggs laid in worker cells proposes to use "the eggs of a laying worker, or, better probably, of an unfertilized queen." This advice, no doubt, is pretty ingenious and yet I have some objections against it. Drones hatched from eggs laid by worker bees are smaller than those from a queen, and even if they should be capable of fertilizing queens, are held in quite low esteem. Well, if these drones are of no account, the *eggs* from which they came could not have been worth much either, and, therefore, I should entirely discard such eggs as regards artificial fertilization. But, must I ask, are the eggs of an unfertilized queen much better? I am, of course, well aware that some authorities "believe" that drones raised from them (I don't mean the authorities, I mean the unfertilized queens!) when fine and large are just as good as any drones, but others "disbelieve," and I cannot help thinking that the latter are right. A fecundated queen is "the" queen, she has undergone quite an important change and what eggs *she* lays are in accordance with nature's best way, while an unfertilized queen in spite of her laying eggs is, to some extent, a sort of undeveloped and imperfect being. Therefore I should not put much confidence in her eggs and rather use those from a good worker-egg laying queen. All right, I hear somebody say, but how to bring this about? How? I answer. Did not. M. G. Doolittle teach us some time ago how larvæ can be taken from their cells, and how they are to be transferred into other cells; and have not hundreds

of bee-men successfuly practised his method since? Well, do as *he* does and transfer a just laid drone egg into a worker cell if you so choose, or into a queen cell; then fecundate it artificially with drone semen and, if you used a queen cell, wait three days (possibly after having protected the egg) till you give it to a colony which has neither a queen, nor eggs, nor any unsealed brood.

From the report of the Commissioner of Agriculture for the year 1885 another quotation may not be amiss: "For putting these claims to the test, we caused a number of queen cells to be built and *just before* the cells were capped I squeezed the contents of the generative organs of nymph drones upon the larval queens. The bees removed the larvæ and destroyed the cells. *After* other queen cells were capped we opened them by making a horizontal incision at the base of the cells, and another at right angles down the side of the cell, and laid back a part of the side, exposing the queen pupa. Through the opening in the cell we squeezed the liquid contents of the generative organs of imago drones upon the pupa queens. The sides of the cells were then replaced and sealed with melted bees-wax and rosin. These cells were placed in nursery cages and hatched in queenless nuclei colonies. These queens were liberated in nuclei colonies after their wings were clipped. Upon being hatched they resembled fecundated laying queens more than virgin queens. Repeated experiments, however, failed to produce a queen capable of laying fecundated eggs. Still, the fact that the treatment given the embryo queens had to such an extent changed their physiological characteristics was suggestive . . . . Continuing the experiment we caused more queen cells to be built after removing the seminal sack from *mature* drones with a pair of pliers, the contents were pressed upon the *larval* queens. The bees removed the uncapped larvæ as before. Most of the *pupa* queens so treated and placed in nursery cages for hatching died in the cell after assuming the imago state and after being partly colored. We hope to be able yet to discover what principles and practice are essential to success which seems possible, for many possible opportunities remain untried." On account of his failing to succeed by these methods the United States Entomologist came to the conclusion that "the best time to fecundate a queen is when she wants to be fecundated, or when orgasm appears," and, as I have already stated in the August number of the APICULTURIST, his assertion is that his experiments were crowned with success.

CHAS. NORMAN.

St. Petersburg, Fla.

WORMS IN COMBS. A NOVEL WAY OF FEEDING BEES. BEST COVERING FOR BROOD-NEST, ETC.

Editor Am. Api: The brood frames in which one of my colonies died last spring contained considerable honey, and before I was aware the millers had begun work in it. I cut out all the worms I could find, but did not feel safe to leave it, so I put it above another brood-nest in which I had hived a second swarm that came off June 18. I think the bees cleaned out the millers and are at work in it, for I have not seen any crumbs or refuse lately as I did at first. Will the queen go up into those combs to lay? and how will it do to leave them double all winter and in the spring when I have a swarm come off place it in one of those brood-nests?

I have fed a little thin syrup at night to the swarms mentioned. Have adopted a very cheap feeder, the covers of blacking boxes, about three to a hive. The feeders are filled late at night, after other bees have gone home. The feeders are so shallow bees never get drowned in the syrup. They come out so silently to their late supper that even the bees in the next hive are not aroused.

Bees are working on buckwheat, and carry a great deal of pollen in the early

forenoon, and very hot days I put water in their feeders and they go for it like thirsty animals.

What do you think best to cover the frames with, board, or duck cloth? I mean for winter and spring cover, as well as for summer.

I have taken off some very nice looking honey, but shall not take off the remaining cases at present, hoping they will be all filled and capped more evenly than the first.

Perhaps you can say in the API all the information I shall need on this subject and not take many lines either.

Medfield, Mass. Mrs. A. E. MASON.

[The queen will take possession of the combs in the top hive and there make it her home unless a queen-excluding board is used between the two hives.

One of the sets of combs will be all right to put a new swarm on in the spring. No harm can be done by leaving the two hives "double" all winter.

Your way of feeding bees is pretty good, and one interested in bees as you are, must enjoy such a way of caring for them.]

FOUL BROOD.

I should like to know how our American friends deal with the terrible disease —foul-brood,—also, what their opinion of the Cheshire cure is.—Perhaps my little experience with this disease may be of interest to some. During the summer months of 1892, I had several colonies affected, and I tried the Cheshire remedy which, as far as my experience goes, is a failure. The first colony I tried the experiment on I removed the worst of the brood, (also the honey) and carefully sprinkled all the combs of hive with the solution. two parts of water to one part of pure carbolic, at the same time feeding diluted honey and carbolic, (all the landing boards of the other hives were painted with a strong solution of the acid) but despite my exertions the malady grew in the affected hive, till the bees had dwindled very low, and were completely demoralized, at which stage I administered a few strong puffs of sulphur smoke, and closed the hive, smothering the bees of course; later on I had a couple more similiarly affected, and treated them likewise with no better results; on other colonies later on I tried salicylic acid and soda, sixteen grains of each to a quart of syrup after previously removing all brood honey etc., and providing a clean hive.—I found this answered best of any and will, I believe, almost always cure foul brood in its early stage, at least in this locality:—I should like to know how you American beekeepers treat this disease. Should you, Mr. Editor, consider this worth publishing I shall feel obliged.

Springwood,
Blue Mts., New South Wales.
GEO. STRATTON.

[If but few colonies are infected, it would be better to destroy them entire. The last method you tried is as good as any].

A CHARACTERISTIC LETTER FROM FATHER LANGSTROTH.

Dayton, Ohio, July 29, 1892.

Mr. H. ALLEY,

Dear Sir:—

When I asked you to send me a Punic queen to test the race, I expected to use her in the apiary of a Dayton friend; but he sold all his bees. I therefore requested you to send them to my friend, D. A. McCord of Oxford. I was there last week and found them still caged. His apiary is on the turnpike, and he had heard such accounts of their vindictiveness, that he did not dare raise any bees of the kind. I will either return them to you, if they live, or send them to any place you may designate.

I have just received a letter from T. W. Cowan, with three *British Bee Journals*. I think that when you read the account he gives of these bees as examined by him in Africa, you will not wish to have anything more to do with them.

You have long been known as the largest queen raiser in the country, and I

should feel very sorry to have the reputation which you have acquired injured by your disseminating a race of bees which I feel confident will have very undesirable traits. In the *British Bee Journal*, June 23, 1892, is an account of the way they were introduced into England, etc., which seems to me utterly to discredit the Hallamshire beekeeper.

Now friend Alley, you must by this time, know enough of these bees, to judge whether they deserve the character given to them in the *British Bee Journal*, and if they do, I think you will no longer send them out from your apiary. I write as your sincere friend. —L. L. LANGSTROTH.

[Many thanks, friend L., for your kind advice. I must say, however, that you are wrongly informed concerning the vindictiveness of the Punic bees. Yes, friend L., I have had these bees long enough to judge whether they deserve the character given them in the *British Bee Journal*. I pronounce every word of the statements in the *B. B. J.*, unqualified lies and false in every particular. Friend L. may find a crumb of comfort in the letter below.]

PUNICS. ROOTS AND COWAN.

Dear Mr. ALLEY :—

I notice an article in *Gleanings* for Aug. 1, page 584, the heading of which reads: "PUNIC BEES—their history and origin. Not a new race but the old Tunisian bees that have been tested and discarded." These statements I will deal with in rotation.

They have evidently been reading Mr. Cowan's articles whose reputation in this country (England), for "accuracy" is of no value whatever.

No person in Europe or America, other than myself—and Cowan says so too—has ever received a live queen or bee from Tunis. I challenge anyone to show where such bees have *ever* "*been tested and discarded.*"

Read what Benton says. But no one other than myself, ever got a *live* queen from him; so much for his "advertisements." Benton had to rest them first in Cyprus before sending them on to me; as to anyone testing them, it is out of the question, which folks will see very soon.

Root says there has been a "controversy" in *B. B. J.* between Cowan and me. There has been *no controversy*, in that Journal at all. Cowan has had all the say *himself*. There has been a controversy in the *Journal of Horticulture*, but the Root's do not hint at it, or reprint any of the articles.

The Root's say Cowan insisted that Punics, were "only Tunisian bees." This is wrong. What Cowan said was, "he knew the bees of Tunis, but the so-called Punic bees did not exist in that country; he had seen the bees at the Royal Dancaster show, where he tried to make people think they were common English black bees and did not come from Tunis, or even North Africa."

Cowan says: "these queens did not cost me more than $2 each", then shows a loss of two-thirds, making the cost on live ones $6 each, which statement is on a par with the rest of his statements.

Root's say: "I refuse to reply to their statements, and that I never intended to pay for the advertisement in *Gleanings*. No doubt it will surprise people to learn that I did *not* order or consent to the advertisement he inserted. I did send an advertisement, but instead of *its* being published they *altered* it,—leaving out the guarantees, etc.,—and concocted and inserted practically a different one, which on no account would I accept, and which I repudiate altogether, *even to paying for it*, and to act consistently in the matter, in no case has anyone been answered who has replied to it, unless money has been sent. As to replying to Root I have their letters, type written, to say, they do not believe a word I say. On the face of this, I should be a "donkey," to write them.

I shall abide by *all* I wrote in the *Canadian Bee Journal*, which, please refer to."

Sheffield, Eng. JOHN HEWITT.

A FINE GOLDEN CARNIOLAN QUEEN.

MR ALLEY: One year ago I got from you one golden Carnolian queen. She has proved to be a fine one. The colony worked industriously when there was anything to do and put up more honey than any of my hybrids. I called the attention of my beekeeping friends to this fact, they came and looked my bees over and acknowledged that this colony had done extra well.

W. H. ASHBURNE.

Ossian, Indiana.

BEST QUEEN OUT OF SIXTY.

MR. ALLEY:—I had a queen of you two years ago. She was as good or better than any I had in my apiary of sixty colonies. I want two dozen more.

Otto, N. Y. A. GAMP.

INTRODUCING QUEENS, ETC.

MR. H. ALLEY:—I received the tested selected Italian queen all right and she is now at liberty. I never keep a queen caged more than sixty minutes, and often less than thirty. This plan I discovered five years ago while experimenting, and have never lost one queen through introduction, although having introduced very many. I like the queen very much as I did others bought of you a few years ago. I shall also want more next season.

Bees have not done very well here this season though all are in good shape for winter. I now have 46 colonies.

Macomb, Ill. J. G. NORTON.

MIGHTY POOR SEASON.

H. ALLEY: Enclosed find 75cts. to renew my sub. to the API. Mighty poor season up this way, and had it not been for Bay State hives and "API wisdom" wouldn't have got a pound of honey. As it is have a fair crop and a local market all to myself.

Yours,

So. Pomfret, Vt. RUSH VAUGHAN.

A GOOD REPORT OF THE PUNICS.

H. ALLEY:

I send you a report of the Punic Bee. I find them the greatest honey gatherers I have in my yard. It is surprising to see them work. I can handle them as well as any bees, I think that they are the coming bee; at any rate, I will have more of them next season if I can get them; they are just black enough to do the work.

West Cornwall, Vt. JOSEPH R. JONES.

SELECTED.

COMMUNISTIC INSECTS.

Never among human mankind can we find so absolute and complete an absorption of the individual by the social group as in the cities of ants and bees, where individual property has never, it seems, been imagined. In these republics what one citizen has for himself belongs to the other. Does a hungry bee meet one laden with booty returning to a city, she lightly taps her on the head with her antennæ, and instantly the latter hastens in a sisterly way to disgorge part of the nutriment provisionally stored in her own stomach.

Ants proceed in the same way as bees, but in addition the ant thus sustained is very careful to show her gratitude. "The ant who feels the need of food," says Huber, "begins by tapping her two antennæ, with a very rapid movement, upon the antennæ of the ant from whom she expects succor. Immediately they may be seen approaching one another with open mouth and extended tongue, for the communication of the liquid which one passes to the other. During this operation the ant who receives nourishment does not cease to caress the friend who is feeding her, continuing to move her antennæ with singular activity."

The collective system of property must have lasted among ants and bees for many thousands of years; for, apart from cases of demoralization, such as may, for example, be produced among bees by giving them a taste for drunk-

enness, these intelligent insects show the most absolute deference and devotion to special property. Their primitive selfishness has broadened out into a collective or patriotic egotism. But these very social species, with their more than Christian charity, have not reached this high degree of civilization at one bound. In the ant and bee worlds, as in our own, there are savages. There are still at the present time certain species of ants ignorant of the divisions of labor, carried so far among their civilized congeners.—"Property; Its Origin and Development."

DOES BEE CULTURE PAY?

It depends in the first place on what kind of pay you want. A lady asked a white washer why he would not work for an acquaintance of hers and he said: "The pay is so quare, he wanted me to take pictures." This man who wanted to pay for laundry and house cleaning with pictures was a landscape and portrait painter, and honey producers would do well to "catch on" to his idea and pay for his blacksmithing and other bills with their product. But the queer thing about paying bills with honey is that of ate there has been very little of this legal tender in circulation. Why, I don't know.

If you could know an old German who calls here occasionally you would soon learn how bees pay him. He is now too old to work in the fields, so in company with his little granddaughter he watches and cares for a few colonies of bees. Does any one for a moment suppose that the old man's sturdy sons who raise thousands of bushels of corn would be satisfied with the pay that their father gets from cultivating bees? Yet the old gentleman is well satisfied with his wages. During the honey season he secures this valuable sweet for the family and his friends, but the big pay comes in making life tolerable for him, in providing food for his mind. On a rustic seat near the hives he watches them go and return, and notices the difference in the color of the pollen on their legs, and the flowers from which it is gathered, and he passes no weary fretful hours, for when "pleasure and profit are combined, time flies swiftly and the heart is glad."

BEES AS EDUCATORS.

A minister once procured a swarm of bees from me saying that he wanted them to teach his children. It was not bee culture as a business that he wanted to teach them, but the lessons of the hive—to be close observers, industrious, working together for the good of all the family, neatness and order.

"So work the honey bees; creatures that by a law of nature teach the art of order to a peopled kingdom."

Since I have been keeping bees all nature is imbued with a fresh, new interest. Whenever I travel, drive or walk, my eye scans the field in search of honey plants. The fields appear no longer to be inanimate, but inhabited with individuals with which I am acquainted and in which I take a lively interest.

CAN WOMEN CULTIVATE BEES?

Yes! Their culture does not require any great outlay of strength at one time but the faithful performance of many little items which alone leads to success. Any woman who can manufacture a good loaf of bread can make bee culture a success, for the road to either is reached only through the performance of many little things at the right time in the best possible manner. Women possess the requirements necessary for the careful manipulation of bees in far greater proportion than the other sex. After years of careful handling the sleeping baby so as not to awaken it, she has received training that will enable her to uncover a hive of bees and not arouse their anger, or remove a case of sections neatly and deftly. She is well fitted by nature and education to handle honey in such a way that the cappings will not

be broken or the delicate surface marred. She will carefully save all bits of comb and wax, for she has received lessons in economy by being told "to spend money judiciously."

CAN WOMEN MAKE MONEY KEEPING BEES?

Of course, if there is any money in bees. A woman can attend to a small apiary while attending to her household duties, if she has the hives located in full view of her kitchen windows. She should not commence with more than two hives, and her knowledge of bee culture should increase in the same ratio as her bees. She may not be able to make much money the first few years, but she may have honey for the family; a cake of wax and pure vinegar.—Prairie Farmer.

NOTES AND COMMENTS.

One of my Perfection Self-hivers was expressed to Dr. C. C. Miller. I supposed he would test it and report to me, a way that most gentlemen do under such circumstances, but the Dr. was not so disposed. In an article which would fill three or more columns of the Api, Dr. Miller gave his experience with the hiver in *Gleanings* of Sept. 1. Most any other person could have said equally as much in two lines, thus: "I tested one of Alley's Perfection Self-hivers and did not succeed."

But then the Dr. had something else in view besides his experience with the swarmer. I need not state what that is, as any one who read his article would have no trouble in seeing the point.

Well, I might have known better than to have sent him the hiver to test. Dr. Miller seems to be a failure in almost anything he undertakes. If one can believe his statements, he never has made a success of apiculture at any rate. "His bees do not winter well; his colonies dwindle in spring; the weather is too cold, too hot, too wet, or too dry, the spring is backward, etc. He does not know why this or that thing is so, etc., etc."

Well, there is one thing that Dr. Miller does succeed in admirably, that is in sarcasm. When the Dr. first wrote "Stray Straws" for *Gleanings*, he did remarkably well. They were then devoid of personalities and were to the point and very interesting. Dr. M., now uses the space devoted to him in *Gleanings* to worry his friends, or those people with whom he does not agree; or, perhaps I should say, those who do not believe just as he does. I cannot say that the Dr. intends to be sarcastic in his treatment of those people whom he so sadly ill treats. At any rate he could not be more so should he try to, so it seems to me. Below is a fair sample of his sarcasm, taken from *Gleanings* of Sept. 1, 1892.

THAT SELF-HIVER. You remember previous history. July 28, swarm caught in self-hiver; queen got out of trap, back in hiver; July 30, all moved back into hive; Aug. 5, old queen killed, leaving eggs, brood, queen-cells, and one queen hatched. Well, the cells were one after another, torn down, all gone by Aug. 8. Aug. 16, I found the young queen in the hiver, not in the trap, so I put her back in hive and took away trap. This morning, Aug. 20, she is laying. Perfection self-hiver a success.

Well, Dr. I do pity you—what is the reason you cannot do as well in bee culture as those people who have had little or no experience in the business?

To the article of Dr. Miller's, relating to the hiver was a foot note by E. R. Root, which is as follows:

If you had tried the Pratt plan there would have been no leak holes from which the queen could escape. We presume it's too late for you to try it this year; but next spring, if you will remind us, we will send you a few of the Pratt swarming escape-boards, and then all you will have to do will be to put the parent colony into an upper story or super above the board, leaving the lower story filled with combs for the reception of the swarm. Of course an entrance-guard should be attached. Alley's arrangement is too expensive. Instead of going to the expense of an extra box, an ordinary super or upper story should be used in connection with an escape-board. The latter can be furnished at a small expense. The Alley box is not easy to attach to

all hives so as to be bee and queen proof in its connections; but a super such as is being used in the apiary, being made for the hives, will fit as a matter of course.

"No leak holes." Well, let's see about it. Brother Root has great faith and interest in the Pratt hiver. There is one case on record where the Alley hiver has failed to hold a swarm but two days, though it did catch and hive the swarm as I have guaranteed they should. Now, let's see if the Pratt swarmer has done as well as the Perfection.

The Pratt swarmer was placed on a hive in my apiary May 30, and by Mr. Pratt himself. In less than ten minutes a swarm issued and it failed to catch either queen or bees.

The swarmer has failed in Pratt's own apiary; also in the apiary of A. Fahenstook, Laporte, Indiana, and I know not in how many other places. Yet, Bro. R. commends it in preference to the Perfection hiver Bro. Root also says the Perfection hiver is expensive. It is no more so than the Pratt. The Perfection hiver will cost the manufacturer about 20 cents each.

By the way Bro. R., why don't you use the Pratt self-hiver as illustrated in a recent issue of *Gleanings*? That is, by placing it in front of the colony, instead of under it? I notice since I exposed the impracticability of the Pratt hiver illustrated as above stated, that not only Root, but brother Pratt have both turned a complete somersault, and now they have not a word to say about that "best I have seen self-hiver."

Brother R. accused me in *Gleanings* of condemning something in the Pratt swarmer and then said I afterwards adopted it.

I resented the imputation in a short article to *Gleanings*, but the editor has not as yet found it convenient to give it space in his paper, in which he falsely and unjustly accused me. Try and be fair, brother R., as you have generally been in most cases, and treat others as you desire to be treated.

I would like to reply to Dr. Miller's article about the Perfection hiver, but I can't spend my time writing articles for any editor's waste basket.

Had Dr. Miller used the hiver according to directions, he would have had no trouble. He experimented for his own satisfaction, and did not succeed, and so condemns the hiver. The metal on the hiver which the Dr. says the queen got through was made by Root. I use it and never knew a queen to escape through it.

A PROPOSED PATENT.

A friend in the State of New York, writes us as follows:

"As you have had quite an experience with patents, permit me to ask a question or two. First let me say why. During the past season I have perfected a plan of management for the successful prevention of swarming.

There will be no caging of queens, cutting of cells, overhauling of combs or brood-chambers, or anything of the kind. Simply build them up strong in the spring, give them room in the sections once a week, then fix them up for winter and that is all.

My question is this:

Will the benefit of such a plan warrant me taking out a patent on it, and on the necessary trap to go with it? It seems to me that this is just what beekeepers have been holding their breath for ever since the frame hive came into use, and when beekeeping became a profession.

By saying what you think about the advisability of a patent, briefly, if need be, I shall be greatly obliged."

[It will be pretty hard to make the experienced beekeepers believe that any arrangement can be devised that will prevent bees building queen cells at swarming time. Yes, it is just the thing beekeepers need, I ackowledge, but it will be a very hard thing to convince them of its practicability.]

A well known and prominent lady beekeeper writes the API as follows.

"I see a great many envy your position in queen rearing, or new developments, etc. But let them pant, you will get there first all the same."

Yes, I'll let them pant and howl. shall keep right on in the same road till the end is reached. When I give my discoveries in queen rearing, as made this year (1892) by me more than th usual howling will go up.

What is better: the progeny of a *Punic virgin* fertilized by a good *Italian* drone or the progeny of a good *Italian virgin* fertilized by a *Punic* drone.—The Hallamshire Beekeeper says that within six miles from Punic Apiary there should be no drone of another race. How about your *yellow Punics*. At any rate your experiment will be highly interesting.

I cannot say which would be the better cross, not having experimented but little in that line. I have two colonies of Punic bees crossed by Italians, they are fine honey-gatherers and gentle.

As to keeping the races six miles apart to prevent mixing, I will say that the Hallamshire Beekeeper is way off. But no more so than some few people in this country who make the same claims.

I now have several "yellow Punic" queens. If, after trying them another season they are found all right, that is, gentle, good honey gatherers, etc., I shall most likely rear some queens of this strain for sale.

I strongly believe in mixing the yellow races as much as possible, yet one cannot do so if he is a queen dealer. For my own apiary I should cross the Italians with golden Carniolans. Each year I would send to some distant apiary for one or more queens to "cross up" stock, and thus infuse new blood and avoid in-breeding. To be sure the bees reared by such a method would not be as handsomely marked as would be the case if in-breeding was indulged in: yet for hardiness and honey-gathering qualities, the mixed strains would be far superior in all respects.

HE KNOWS IT ALL.

Below I give the opinion of what pure Italians are by one of those chaps who know it all.

"MR. ALLEY,—Can you furnish me a queen that shows all five-banded bees with no black rings, or one that shows all three-banded bees and no black rings between the yellow bands?"

Now comes the funny part of the letter:

"In my experience with Italians I find no bees are pure that show black rings between the bands.

Three bands with no black rings between bands are pure Italians: three bands with black rings between, only half Italian; two bands, only one fourth Italian; two bands are pure race *if uniform*."—

My friend, there is no purity about Italian bees; let the bands be few or many. Italians are hybrids whether in Italy or in America. I have no doubt the so-called Italians are black bees mixed with yellow Carniolans.

"NO GREAT SHAKES."

In a recent letter received from a lady in Canada, she says "I had formed an idea that the API was no great shakes. Did not I find myself grandly mistaken, for now my opinion, since I received copies, is so changed in regard to it that it is a very great disappointment to me that I must do without it.

Of "Thirty Years Among the Bees" the same writer says: "Every word has been already devoured most greedily. I have found a *good many* helpful things and I am not flattering, nor anything like it when I say that I find your work and teachings so much more plain, and best of all,—practical than the others."

Bangall, N. Y., July 21, '90.

MR. ALLEY,

Dear Sir:

Kindly inform me where I can procure Holy Land and Cyprian queens. I find the golden Carniolans to be large, handsome and industrious bees.

Yours Respectfully

GEO. H. DEUELL

[You can get those worthless bees in Cyprus. What do you want them for? 'Tis none of my business, yet I feel compelled to say that if you desire bees that are of no value at all, you can save much money and expense, by purchasing them in this country. Try the five-banded bees and you will like them.]

AMERICAN APICULTURIST

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Henry Alley, Wenham, Mass

Established in 1883.

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A WARNING.

Do the beekeepers of this country, who are introducing those five-banded, bees and queens yellow clear-to-the-tip realize what they are doing? Have they forgotten the story of the fearful loss of bees all through the west and northwest in the winter and spring of 1892? Cannot they learn anything from such costly and dearly bought experience?

It seems not. The call still continues by many who order queens for those five-banded bees. Now, friends, I tell you frankly that sooner or later, sooner most likely, your apiaries will be depopulated and ruined, and you will be ready to retire thoroughly disgusted from the bee business; your complaints that "bees are doing nothing" will be heard as long as you persist in introducing such a strain of bees as you are pleased to call five-banded Italians. Throw such worthless bees to the dogs, and you will soon have reason to say, "My bees wintered well and have stored lots of honey." I tell you friends that one queen such as the inexperienced beekeeper calls a hybrid, is worth one hundred of those beautiful, yellow clear-to-the-tip queens whose bees are so handsome. There is business in the so-called hybrid queens.

Well, are queens whose worker progeny have all the way from one to three yellow bands, impure? Most decidedly I say, no.

Did you ever get an imported queen whose worker bees were marked with five yellow bands, and whose daughters were yellow clear to the tip? Of course you have not. Every queen that ever reached this country from Italy produced what are called hybrid bees.

Five banded bees are produced by in-breeding. Every experienced beekeeper knows the deterioating effects of such a method of propagation. In-breeding destroys the constitution, vigor and all that goes to make up the life of a well-bred, hardy and vigorous animal. I know of nothing in the animal or insect kingdom that more thoroughly illustrates the debilitating effects of in-breeding as a colony of those five-banded Italian bees.. They are too lazy to sting or to resent an insult of any kind; they will not even keep out of each other's way.

True, these bees are handsome and beautiful to look at. I want something beside beauty to fill the bill for me, so far as getting profit from an apiary.

Give me beauty if it is not at the expense of other qualities.

Do our large honey producers boast of having their hives stocked with five-banded bees? Did you ever hear any one of them say he could show the handsomest bees to be found in the world? Does Mr. A. E. Manum of Vermont, one of the largest honey producers in the world, advertise queens that will produce five-banded bees?

I think his advertisement reads thus: "Leather-colored queens for sale." He says nothing about how the bees from these queens will be marked.

Don't you know that one of those leather-colored queens are worth one hundred of those yellow clear-to-the-tip sort? They surely are.

Why cannot our younger and smaller apiarist profit by the experience of the prominent and larger beekeepers?

In my experience in rearing Italian queens, I have found that "breeding" queens whose daughters were more or less black at the tip, striped and leather-colored produced the most reliable and hardy, as well as the most superior honey-gathering bees. The fact is that such markings as black at tip, striped and leather-color indicates hardiness and

vigor; while the pale yellow which reaches clear to the tip, means a delicate, puny constitution, and short existence.

I hope I have said enough here to satisfy the reader that it is not to their interest to rear or to introduce queens that produce five-banded bees. As surely as you do it, your apiaries will be ruined, and you will soon give up keeping bees in disgust.

Purchase queens of those dealers who rear the common, or in fact, I might say the typical and real Italian bees. Pure, profitable, and the best strain of Italian bees are not five-banded. The queens vary in color from quite dark to golden yellow.

Do not complain to the dealer of whom you purchased the queen that she is a hybrid.

There is now and then a bee that has but one narrow band. If the bees are good workers, the queen prolific, you certainly have a queen worth all you paid the dealer for her.

On the other hand, if the queen is unprolific and fails to fill the hive with bees, or are poor honey-gatherers, you have good reasons for complaint and for demanding other queens to replace all inferior ones.

Sometime ago I called for reports concerning Punic queens sent out from the Bay State Apiary. Up to date, three reports have been received; those were not very unfavorable.

Right here I want to say that I can ship no more Punic queens this fall.

Gleanings gave these bees such a hard rub that Brother Pratt and I concluded not to rear any more. I find I missed it badly. The call for them came in by every mail and has continued all through the summer.

The good report of these bees in *Gleanings*, by Mr. Moore, Aug. 1, 1892, seems to be more weighty in their favor than all unfavorable reports made of them in the several bee-papers.

I shall rear no more Punic bees for a less sum than three dollars each. In the season of 1891, and up to Aug. 1, 1892, I was obliged to run three queen rearing yards. One for Italians, one for golden Carniolans, and the other for Punic bees. Now this requires an unusual amount of labor; 'tis more than I can stand, or care to do.

I shall rear golden Carniolans in the season of 1893. This race, or strain of yellow-banded bees have given universal satisfaction in all cases. Of 1000 golden Carniolan queens sold last season and this, not one word of complaint of them has been received. Now, after these bees have stood the test of three seasons, and found to be up to the standard required of bees, why shouldn't I make more of a speciality of them?

During the past ten days there has been some fall honey for the bees to gather. I find by actual observation that the golden Carniolans and Punics have gathered double the honey that any other bees have in my apiary.

I have watched several of the Carniolan colonies while working in the middle of the day; they appeared to be doing so well that I opened one or two hives, and was surprised to find the amount of honey they had put in.

These bees are very hardy, winter finely, very gentle and industrious as well as possessing the other good quality—yellow-banded.

I cannot supply any more Carniolans this fall.

The *Canadian Bee Journal* has just found out that ground cork is excellent material for winter packing in bee-hives.

Well, D. A. Jones could have told the new editor of the C. B. J. that cork was used for packing a good many years ago.

Mrs. Jennie Atchely is conducting a department in the *American Bee Journal*. Mrs. A., has the knack of making her productions interesting.

In the articles on the smoker question that have appeared of late in the *Bee-keepers' Review*, the Bingham seems to have carried off the palm, says *Gleanings*.

Of course the Bingham smoker carried off the palm. They are the smoker. Don't waste your money by sending to that man in Indiana for one of those cheap and worthless cold blast smokers. By the way, I wish I could get my cash for running that cold blast smoker and tin can feeder advertisment one whole year. Be careful to whom you send money. "A word to the wise," etc.

There is a feeder being sold under the name of "Hastings feeder." Don't touch it. It is not half as good as a tin-pan or glass jar, described in September API, and the price you would have to pay for that patent feeder would purchase a dozen tin pan or glass jars. I would also like my pay for advertising that Hastings feeder.

To all new subscribers or renewals, and on receipt of $1.00 the API will be sent one year, and a drone-trap of latest style, mailed to each. The API will be mailed till January 1, 1894, to all those who renew at once.

To any one who will send one new name for API, and $1.00, we will mail the paper to both till January, 1894. All such subscribers will be entitled to one golden Carniolan or Italian queen by remitting 75 cents when the queen is desired.

I want to just double the API subscription list and can do it if each reader will try and get one of the above premiums.

Since September came in the weather has been more favorable than usual for the bees. I have watched the yellow Carniolans work and must say that I think there are one hundred bees going in and out the hive where there is one five-banded bee. I only wish that some strangers could have visted the Bay State Apiary and witnessed this pleasing sight.

As stated in a recent issue of the API, our drone-and-queen trap has been greatly improved, and is now so constructed that it can be used as a self-hiver. All need be done to make it self-hive any swarm that issues is to construct a box as per description in a recent issue of this paper.

In looking over nuclei in my Carniolan yard, I found I had shipped some queens that I really would like to have kept. If those who have received queens of this race, find they have one or more queens having two very wide bands of a rich orange color, will send me a sample of the bees, I will pay $10 each for two or three that I shall select.

What do you think of the note of "warning" as given on page 158 this issue? Speak out.

Will you send one new subscriber to API, and thus secure the prize offered, and at the same time aid in enlarging our subscription list? What say?

The excitement over the Hoffman frame has about died out. Well, we went all through the same thing nearly ten years ago, now have settled down on the commonsense, plain Langstroth frame. See the point, eh?

Why don't our larger honey producers introduce five-banded bees into their apiaries? Well, *why* don't they?

What a novel sight it would be to see a crate of fine honey made by those five-banded bees! Did anyone ever see anything of the kind? Most of those fellows who keep such beautiful bees report bad weather and bees doing nothing. Is this not correct?

Those beekeepers who have the homely three-banded hybrid Italians, ship honey to market by tons and seldom complain of poor seasons or bad luck. Wake up friends, and clean out those

things of beauty, and you will soon cease howling about poor seasons, etc. You bet they will.

The *White Mountain* apiarist has ceased to exist. How about that sixteen hundred subscribers? It was pretty hard for older bee-paper publishers to believe that "1600 subscribers" story. Bee-papers do not grow quite as rapidly as Bro. Eelenwood would have had us believe. Whew!

Supply dealers, especially those who make a specialty of queen rearing have had a hard time this year. About two-thirds of all the colonies in the country that went into winter quarters in the fall of 1891, died before June, 1892. A good many dealers have not realized enough to pay for the advertising. Well, farmers have their off years, but the bee-keepers seem to have them most too often. We know it.

Reports of the Punic bees are generally favorable. The Punics are, however, like all others of the new races. They have good as well as some bad; or rather, some objectionable characteristics.

I find them a strong, prolific, and industrious race of bees. They do not bite nor sting, as some reports say. All Punic colonies in my apiary are uncommonly quiet and gentle.

If our present strains of bees are to be improved, it is actually necessary to get the new blood from the latest imported bees. That a fine and desirable strain of bees can be bred from the Punics I have not the least doubt. With my experience in breeding these bees, there has been a strong tendency to yellow in the young progeny, both in the bees and queens. This is a freak I cannot account for. Father Langstroth has an idea that the Italians might have come from the Punics. I am not sure they did not so originate, as I have seen queens and drones reared from imported Italian mothers that were as black as any Punic bees we now have. If Father Langstroth is correct in his opinion, then there should be no trouble in producing yellow bees from the Punics.

Now, Dr. Miller, if I succeed in getting a strain of yellow bees from the black Punics, what shall I call them; black, or yellow Punics?

Just show me a strain of dark bees that have any original yellow blood about them, and I will soon produce beautiful yellow or golden bees from them.

Hope I have spoken this loud enough to make Dr. Miller hear me. Don't be afraid to try the Punics

---

THE USES FOR HONEY.

The extensive uses of sugar on fruit is not as bad as the cake mania that rages in so many kitchens, says the *Horticultural Times*. The fruit acids neutralize the indiscriminate and injudicious use of sugar. It is no serious thing to eat considerable sacchatine food in a pure state, but not in the form of pure refined sugar. It eaten and taken in the form honey it at once becomes a valuable medicine and food Instead of having it given us in this form in a mixture with bulk foods, as in the cane and beet, we have it mingled with fruit juices exuded from flowers highly charged with medicinal properties in the alchemy of nature and the apothecary of the bee hive. The advantages of honey as a medicine or food are too extensive to be considered at length here. Honey taken as a food becomes a powerful medicine to the sugar-fed and half diseased, and many must begin on small quantities and acquire an appetite for it. Foul air, improper ventilation, coal gases, together with the sudden change and exposure of lungs and throats to zero weather, or worse, in a moment, is the source of no end of throat and bronchial trouble. A free, regular, and constant use of honey is, probably, the best medicine for throat trouble there is, and its regular use would be largely corrective here. It is always best to take our medcine and food together.—*Ex.*

THE BEE'S SERMON.

Good-morning, dear friend! I'm a clever young bee!
And a sermon I'll preach if you'll listen to me;
It will not be long, and it will not be dry,
And your own common sense my remarks may apply.

Not slothful in business must be the first head,
For with vigor we work till the sun goes to bed;
And unless one is willing to put forth one's powers
There is no getting on in a world such as ours.

We are fond of our dwellings; no gossips are we,
No gadders about idle neighbors to see;
And though we are forced for our honey to roam,
We come back as soon as we can to our home.

"The way to be happy and wealthy and wise
Is early to rest and early to rise."
This proverb has molded our conduct for years.
And we never sleep when the daylight appears.

If you were to peep in our lives you would own
That as models of cleanliness they might be shown;
All dust and all dirt, without any delay,
Are swept from our door and soon carried away.

Ventilation most thorough our domiciles share,
So no one need teach us the worth of fresh air,
For we could not live as we've heard people do,
In close rooms where no healthy-giving breeze can pass through.

When one of our number is sick or distressed
He is sure of kind treatment from each of the rest;
We sympathize warmly with those who're in grief,
And are eager to proffer immediate relief.

We carry our stings not on any pretense
For aggressive attack, but in self-defence;
We meddle with no one, and only repel
Assailants who will not in peace with us dwell.

Now my sermon is ended and you, if you please,
Some hints may derive from us hard-working bees;
May your life be as useful, your labors as sweet,
And may you have plenty of honey to eat! —New Orleans Picayune.

If anyone desires to examine one of our new drone-traps, the same as is used in the Perfection self-hiver, one will be mailed on the receipt of sixty-five cents. If desirable to use as a self-hiver, just make a box as per description in July API. I want every reader of the API to use one of these traps. If not entirely satisfactory, the money paid for them will be returned.

If any reader of the API wishes to examine my self-hiver, as well as a drone-trap that will catch and destroy all drones as soon as they attempt to leave the hive, send $1.50 and get both the above by express. Bear in mind that the trap used in this swarmer can be used in the self-hiver, or separately as a drone-trap. This is a feature no other swarmer possesses.

If you care to test our Italian, yellow Carniolan and Punic bees, one queen of each race will be sent for $3, and the API for one year besides. Now here is more for the small sum of $3, than can be had of any other dealer in the world.

GOOD ENOUGH FOR HIM.

Editor AM. API:—In regard to the Punic bees would say that they are the best race of bees I have ever seen, and they are the gentlest bees I ever handled. I have not had a sting from one of mine yet. I do not use a veil to protect me from the Punics. They are good enough for me.

S. F. SAMPSON.

Ronceverte, W. Va.

ADVERTISEMENTS.

HONEY WANTED.

Beekeepers in New England having small lots of either comb or extracted honey for sale can find a purchaser by stating amount quality and price.

Address

HENRY ALLEY, *Wenham, Mass.*

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Mention this paper.

Send 50 Cts. For my Book, entitled—'A Year Among the Bees,"—114 pages, cloth bound. Address

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Punic queens after July 15. Untested, each, $1.00; 6 for $5.00. None but Punic drones flying. No other bees near. Safe arrival guaranteed.

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would surprise every Beekeeper; so will our Catalogue of Apiarian Supplies, for it contains many things to be found in no other.

QUEENS, BEES, HIVES,

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YOU WANT COMB FOUNDATION,

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two stories, including 9 frames and two section cases, nailed for $1.95.

Circular on application.

I. J. STRINGHAM,
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LOOK! LOOK!

I manufacture the MODEL BEE-HIVE, FRAMES' SECTIONS, SMOKERS, HONEY CANS, SHIPPING CASES, BEE VEILS, etc., etc. Also breeder of ITALIAN QUEENS.

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Address

W. R. STIRLING,
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PORTER'S SPRING BEE-ESCAPE

Saves temper, time and bees. Prof. Cook says: "No bee keeper can afford to be without them." Wm. McEvoy, Foul Brood Inspector, Ont., Can.: "They should be used in every bee yard in the whole wide world." Thos. Pierce, Pres. Eastern N. Y. Bee Keeper's Asso'n: "The time will soon come when every beekeeper will use them." Send for testimonials and read what others say of them.

PRICES—Each, by mail postpaid, with full directions, 20 cents. Per dozen, $2.25.

If after three months' trial they are not found superior to all other escapes and satisfactory in every way, return them and we will refund your money. For sale by dealers.

In responding to this advertisement mention API. R. & E. C. PORTER, Lewistown, Ill.

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We club the AMERICAN APICULTURIST with any of the papers below named. The regular price of both is given in the first column.

The American Apiculturist,	$0 75	
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" Thirty Years Among the Bees and Beekeepers' Directory,	1.75	1.00
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Our new illustrated Price-list and Circular now ready to mail. Sample copies of API mailed free.

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Unbiased and Independent;
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And filled with **IDEAS** from cover to cover. Send 10 cents for three back numbers and see if this is not a truthful advertisement; or, better still, send $1.00 and receive the REVIEW one year.

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THE AMERICAN APICULTURIST.

A Journal Devoted to Practical Beekeeping.

VOL. X. NOVEMBER, 1892. No. 11.

MY OUTING.

A WELL-KNOWN BEEKEEPER ON A VACATION.

Having an inclination for the water and a desire for an ocean voyage, but not being an Astor or a Vanderbilt, I of necessity had first to consult the depth of my purse. So having looked over the many excursions advertised, I finally decided to try a trip to Portland, Me., via the Maine S. S. line. Accordingly Wednesday evening, Sept. 27th. I wended my way, grip in hand, to the dock in N. Y. City and was soon snugly domiciled aboard the fine steamer "Cottage City," room 41, which room turned out to be a most delightful one being situated at the extreme bow with a door opening outside. I speak of this because it is a desirable feature especially if the wind is very strong, so that it is uncomfortable to sit outside, you can just fasten your door open and sit within or lie at full length in your berth and enjoy the scenery as you sail along. As we pull out from the wharf the pleasure begins. Running along with difficulty to steer clear of the many ferry-boats, tugs and small craft we soon leave the grand city behind. The first great landscape we reach is New York's great country seat for her erring ones, "Blackwell's Island." To look at it from the outside, one would almost be persuaded to commit some offence if he knew a domicile on this beautiful island would be his punishment for a little while. Next we come to "Hellgate," the great bed of rock reaching out from the village of "Astoria" to the junction of Harlem river and seemingly forming a great barrier to navigation; but, thanks to General Newton and modern science, it is now comparatively safe. We now pass the large public buildings on Ward and Randall Islands; also Oak Point a pleasure resort on one side, and Hallet's Cove, "Bowery Beach," and Steinway, the headquarters of the great piano makers, on the opposite or Long Island side. A little further we pass the North and South Brother Islands also Rikers Island, all of which have of late become the property of the city of N. Y. and devoted to some department of its public business. We now emerge into L. I. Sound and, as I look towards the Westchester side my eye strikes some old familiar points that remind me of boyhood days—Barretto's point, Hunt's point, mouth of West Farms creek, or the outlet of the Browne River, where is situated old black Rock. Here I used to go to fish and dig clams and

oysters (on Saturdays)—those were the "halcyon" days.

But the steamer sails on. Soon we reach old "Fort Schuyler" and another fort directly opposite which has been built later; I forget the name but I notice a large sign "Torpedoes, do not anchor." We were not looking for torpedoes so we passed on.

The sound widens now, Connecticut shore in the distance on the left, Long Island on the right. Not being familiar with the landmarks now, I get out my glass and view the scenery through it, till at last darkness settles and I see nothing but now and then a light from the many lighthouses which are placed at intervals along either shore and the grand starlit heavens from a cloudless sky with a beautiful display of the aurora which brings over me a feeling of awe, and I exclaim, surely "The heavens declare the glory of God and the firmament showeth His handywork."

But now another feeling comes over me which is common to all the wants of the inner man. To satisfy this, one needs only a good supply of "filthy lucre and a barter with the steward which is all in his favor (it comes high but we must have it); however, when we are on our outing we are apt to ignore the cost. Consideration of that will come afterwards. Having attended to the inner man with a prodigality to be remembered, we light our fragrant Havana and repair to our room to read the "The Little Minister" till time to turn in. Just as we are thinking about doing the same, a knock comes at the door. Opening it, a gent stands without who says, "I understand I am to share this room with you to-night." Of course, being of an hospitable nature, I say "certainly—come in! glad to have company, getting awfully lonesome here."

We soon get acquainted and I find him a true gentleman and I might say a neighbor, as he hailed from Orange, N. J.—Mr. Frank B. Holmes. He soon left me, however, his route being *via* Cottage City to Edgartown. We reached Cottage City about 5 A. M. I was up however by 4 and enjoyed seeing a sunrise at sea, the morning being clear and beautiful. After discharging a large number of passengers and freight, we cast loose again to commence our ocean voyage around Cape Cod to Portland. This was one grand old day—old ocean behaved nicely.

I was not one bit sick, but hungry all the time. Arrived in Portland half past six P. M.

More anon.

T. O. PEET.

Arlington, N. J., Oct, '92.

BEAUTIFUL BEES.

ON Aug. 27, 1892, I sent $1.50 for subscription to the API and for an Italian queen bee, pure in her own blood and one that you believed to have met a pure Italian drone. She was put in the hive Sept. 6, 1892, and a few days afterwards was found to be laying; I thought I would look at her progeny a few days ago and I must say I was very greatly astonished; her worker progeny look like lumps of gold; I never saw anything like it. The apiary is three and a half miles away, but the next time I go out there I will cage some of the workers and send them to you. I have now Manum, Hutchinson, Carey, Alley, Wood, Durall, Moore and other queens in the apiary, but have never seen anything like this queen's worker-

progeny. Did you make a mistake and send me a Carniolan or a Carni-Italian queen? Have you a record of that queen? I should like to learn about her antecedents. She and her young are beautiful to behold and I began to feel quite proud and delighted over her; but how you have knocked the gilt all off of "pretty bees" in your Oct. API. It's enough to make the "pretty bees" feel guilty and may be they will when they read your Oct. number.

I have been wondering ever since I read the Oct. API how you could send out such beautiful bees and then give them such a "black eye."

I am looking forward with great expectations to your promised articles on queen-rearing in the near future.

I should also like very much to see articles in detail on a system of *re-queening* to prevent swarming, and with it the details of *nuclei management.*

What a "boom" the announcement and discussion of these topics would give the API the coming year.

WM. S. SLOCUM.

Newport, R. I.

[The above queen is of the five banded strain Italian. Beauty, I fear is all the good quality she may possess. However, some of the five-banded bees prove to be very fair workers.

Yes, I gave the beautiful bees a "black eye" and told only the plain truth about them, generally speaking. I am ready to rear queens and sell them to those who demand beautiful bees instead of bees for business; but I want it understood, in the first place, that beauty is the only quality that I can or will guarantee.

There are strains of Italians that possess good honey-gathering qualities that are handsome enough to please any one; in fact, this strain of bees combines both beauty and business.

It is not for any beekeeper's interest to introduce five-banded bees. All who do so will have reason to regret it. I advise all to drop such bees and introduce a more hardy and industrious strain of yellow bees. If my advice is heeded, there will be less loss of bees in winter; more success in summer, and far less beekeepers abandoning the pursuit. Even in a moderately poor honey season, the right strain of bees will make a good showing in surplus honey.]

PUNIC BEES.

ON the 30th of June the editors of another journal say they failed to find any Punic bees in Tunis, and in the same article speak of being on the "very spot" in Tunis whence fifty stocks were purchased from the Arabs, and the queens sent to Mr. Hewitt, exactly as stated by "A. H. B. K." on August 20th last. Can you explain, Mr. Editor, what they mean?

On June 16th they questioned the truth of there being a stock of pure Punic bees in the country. Now it is an "imported one," and they say "they have yet to see such a stock in this country or to hear of any of their correspondents having one." Do they not give themselves away? It clearly shows one of two alternatives — viz., either that your correspondents have more enterprise in them than others, or else there is an endeavour to keep the public in ignorance that such bees are to be had.

I have seen somewhere about forty hives of bees in one apiary, every one of which was headed by a pure Punic queen, and in which pure Punic bees were working, and so well do I like them that I intend very shortly to have the

whole of my apiary either pure Punics or Punic crossed. See my letter in *Journal of Horticulture*, January 7th, page 11. A friend of mine who has every facility for inspecting my bees says that he is so well satisfied of the superiority of the Punics over the common bees that as soon as he can effect the change he shall not keep a common bee in his garden. These same editors gave us to understand on August 27th last that we could get these queens imported for 10 francs each, equal to 8s. Now they tell us "the supply is stopped, and none will be sent in future." Nor does it appear that they have brought a queen home with them, except, perhaps, a dead one. So far my Punics are far in advance of the others this season, and I am glad to say I can obtain all the Punic queens I want alive and well. Please explain the above confliction.—WM. CARLTON in *Journal of Horticulture*, England.

[If any one can keep track of the editors of the *B. B. J.* they can do more than the editor of the API is able to do. Cowan says there are no such bees as Punics. In the next paper, possibly the same paper, he will give all the evidence possible that such bees do exist.

Cowan said no one ever heard of yellow-banded bees in Carniola, yet, by referring to his bee paper the *B. B. J.* there was abundance of evidence to prove that there was not an apiary in Carniola that did not show more or less yellow-banded bees.

Beekeepers of America, save a few close friends of Cowan, long ago had reason to discredit any statements made editorial in the *B. B. J.*

Cowan went in to ruin the reputation of John Hewitt; it now looks as though Hewitt would come out unscorched, while C. has suffered badly in the muss. "Do unto others, etc."

THE ALLEY BEES.

MR. ALLEY:— That controversy between Mr. Frank Benton and you regarding those yellow bees you produced by selection and breeding from what hitherto had simply been called the Carniolan bees and which you named the "golden" Carniolans—said controversy methinks involves a preliminary question that has to be solved before any other discussion concerning them can be entered upon. The question I mean is this: Have these bees any properties of their own? Are they endowed with any characteristics that distinguish them from the Italian bees? Is for instance their color a peculiar one? Or their size? Or what else?

If the question is to be answered in the negative then these bees are (or are they not?) Italians and there seems not to be much of a necessity to give them a name of their own.

But if the answer has to be made in the affirmative then of course they must be baptized and the fraternity has to decide who is right, Mr. Alley or Mr. Benton.

Will you as the "father" of these bees give us light in said direction and pardon me—who never saw one of them—when till further information I just call them "The Alley Bees"?

CHARLES NORMAN.

St. Petersburg, Fla.

[I have on several occasions given in the API the history of the yellow Carniolans. The Carniolans are very gentle, industrious and handsome bees, that is, they have three yellow bands of a rich orange or golden color. I hardly think any one can distinguish them from the Italians; yet there is no Italian blood in

them that I am aware of. I can say, however, that they give much better satisfaction than Italians]

A HONEY PLANT.

Mrs. Harrison says a good word for sweet clover (mellilot) which in Illinois is classed among the noxious weeds to be exterminated, which she thinks a great mistake. It has no burrs or stickers, and dies root and branch the second year after blooming. It takes kindly to waste places and to poor gravelly soils, and serves a good purpose for the railroads, in preventing their cuts and embankments from washing. D. A. Jones, of Canada, a noted beekeeper of that country, had control at one time of nine miles of railroad, and furnished the workmen who kept it in repair with seed of the yellow variety, *Mellilotus officinalis*, requiring them to carry it in their pockets all the time, and sow it whenever they disturbed the soil. The Dadants had a friend who was a beekeeper at Keokuk, Iowa, who complained that his bees did not make as much honey as theirs did at Hamilton, across the river. The Dadants recommended that he sow the seed of sweet clover in all waste places, which he did, and in a few years reported that his locality had improved in honey production. It bridges over the interim between the blooming of white clover and Autumn flowers, and is rapidly gaining in favor among beekeepers. Judging from its rank growth in this locality, there will not be a cessation in the honey flow until frost, for it will furnish a supply until fall bloom.—*Exchange*.

Send fifty cents for one of our improved drone-and-queen traps.

INTRODUCING QUEENS.

A good deal of patience, deliberation and skill are necessary to handle bees successfully. To well qualify one who in other respects is fitted for the apiary, he must study the nature and habits of the bees thoroughly. A writer says: As quite a number have asked the best method of introducing queens, I will here say that I hardly know which way is best, but, as I have been quite successful in the last five years, not losing a single queen that I now remember of, I will give my plans. The first is the "candy plan;" but I do not like the directions that go out with the candy plan. I first know that my hive is queenless, then I lay the cage on the frames, wire downward, remove the tin from the candy edge of cage, and let them severely alone for one week, and I always find the queen out and laying. A great number of queens lost by introducing, I am satisfied, is because the hive is opened too early. Put in the queen, and do not, under any circumstances, touch it for a week, is my advice.

Another good way is to keep the queen caged over hatching brood, and have no wire cloth on the cage; but as this is more trouble, we have not used it any this year. I would never make the colony queenless before putting in the new queen, as there is more danger in your leaving some little, dumpy cell in the hive that will hatch before the queen is released, than there is in putting in the queen at the same operation the old one is removed. Then there is no danger of a queen hatching for ten days, and by that time the introduced queen will be out. But, usually, the new queen is out and laying before the bees have time

to start cells at all. Of course, when the colony has become queenless by accident, you should give them a queen the first chance, but be sure they have no virgin, or queen-cell, otherwise you will fail. Should I have one of those bad colonies to introduce a queen to, such as Mr. Doolittle speaks of, I would put the queen into the hive three days in the cage; I would take away all brood, and give them empty combs, or combs of honey. Then I would shake the bees all off the combs in front of the hive, and turn the queen loose with them, and as soon as they were all in I would shake them up again, just as before, and then shut up the hive. In a few hours give them a frame of brood, and then let them alone. — *Exchange.*

[It appears to us that there is more foolishness written on the subject of introducing queens than any other subject connected with bee culture.

A queenless colony should have no acquaintance with a queen that is to be introduced to them unless the bees have been queenless 72 hours at least. If a colony has been queenless three days, it is perfectly safe to smoke the bees with any kind of smoke (tobacco is best) and let the queen in on the combs at once, throw some grass against the entrance to keep out robber bees, and all will go well. Don't disturb the hive for a week. This is good advice.

What a queer idea it is to remove all the brood from a colony in order to introduce a queen successfully. It strikes us that no person of any experience with bees would advise or resort to anything of the kind.]

HE KNOWS A GOOD THING.

MR ALLEY:—I like the API above all the other bee-papers.

Williamsburg, Ohio. G. W. FELTON.

THAT HUNDRED-DOLLAR QUEEN.

I received a letter a few days since from one who had some time since purchased a daughter of your $100 queen. He said she was the best queen he ever bought. He used her for a queen mother, and she did him a great deal of good. He also remarked that such a queen was cheap at $100. I have sometimes thought I would import a a new race of bees, and also would like to, with others, try my hand at getting "*Apis dorsata*" from India. But if one spends his time and money, runs the risk and worry of importing bees, and then gets slandered, abused, and propolized all over generally, as you have been for his pains, there is not much encouragement in seeking new races. By the way, there will be but few bees reach America alive across the Atlantic for some time.

Brimstone, smoke and sulphuric acid for half an hour, and then held twenty days in quarantine, are not just exactly conducive to receiving them in the best possible condition.

W. C. FRAZIER.

Atlantic, Iowa.

[Very good, friend Frazier, you seem to understand the points. Just as sure as you, or any one else, as to that matter, succeed in landing any new race of bees in America, you will be slandered and stamped a fraud, as all have been who have been enterprising enough to import or produce new races or develop new strains of bees. But then you know it is not the better class of beekeepers who do the slandering. 'Tis those fellows wanting in enterprise, common sense and decency who stoop to do such contemptible things. The better class of beekeepers will support you and purchase your goods.]

BEES HAVE DONE WELL.

Bees have done well in this section the past year and made lots of honey in June and July. Last spring was the hardest year ever known; more bees lost by starvation after May 1st than were lost in winter. My own average was 40 lbs. box honey per hive spring count. Bees now strong and plenty of stores. This has been a great year for swarming, and the old fashioned box-hive beekeepers have plenty of bees and not much box honey. Some failed to get any. As the most of that class of beekeepers know it all, there is nothing for them to learn.

J. R. COMMON.

Angelica, N. Y.

[Yes, they know it all. Those box bee-hive beekeepers can tell us all about the "king bee," and how to daub the inside of an old box-hive with molasses in order to prevent a new swarm deserting after being hived.

There is one thing they do not boast of, and that is the amount of honey they get each season.]

SPECIAL OFFER.

The usual price at which I have sold an individual right to make and use the drone-trap is $3. Until further notice I will sell the right for any Township in the United States at the above price, $3. One of the latest improved Self-hiver queen-traps will be mailed each purchaser.

Any one disposed to engage in the sale of the trap and Self-hiver will be given the deed of any County for ten (10) dollars.

Address
HENRY ALLEY,
Wenham, Mass.

Read SPECIAL OFFER on second page of cover, this issue.

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Please find some friend who will send in his subscription with yours.

THAT WARNING.

THE editorial on above head in last API has stirred up quite a breeze. I well knew when I wrote it that the five-banded-bee men would come down on me like a thousand of bricks. Well, let 'em come down; the truth should be told though the heavens fall.

One five-banded beeman thinks he should not pay for his advertisement in API because the API has come down on the five-banded bees. As that fellow had sold all the queens he reared last season before said article appeared in this paper I do not see that he has any reason to find fault. I can say that I paid A. I. Root for my advertisement of

Punic queens in *Gleanings*, yet I found no fault when *Gleanings* said such hard things of the Punic bees. I hope no one thinks the editor of the Api will put on a muzzle for the sake of a three-dollar advertisement. I shall continue to express myself through this journal even if it drives every advertisement out of the Api. I notice that the editor of *Gleanings* says many hard things of the five-banded bees, yet his advertising columns are well filled with advertisements by the five-banded beemen.

The only bees in my yard that required feeding this fall were the five-banded Italian. The colonies of this variety are very full of the most beautiful bees, yet they could not and did not gather enough honey to winter on.

Friend Alley, of the *Apiculturist*, seems to take it greatly to heart because we can not declare that his (Alley's) hiver is better than Pratt's. As we understand automatic hivers, and the objects sought, we can not but regard the Pratt as superior and better, both as to its cheapness and general operation. The grounds of our preference have already been given before, as well as incidentally in this issue. Only time can decide regarding the relative merits of any hiver, or whether or not they will ever be regarded as a permanent success.—*Gleanings, Oct.* 15.

If there is any good reason why Mr. Ernest Root should so misrepresent me regarding the self-hiver I would be pleased to know it. I never have in any way intimated that I wished him to declare or desired Brother Root to say the Alley self-hiver is as good even as the Pratt hiver.

The only thing there is any question about is the fact that I cannot make the Roots believe my self-hiver has as many good points as the Pratt.

Brother Root will not admit that my hiver is more than a box to catch a swarm when one issues, notwithstanding the fact I have clearly pointed out to him that the Perfection hiver not only catches the swarm, but hives the bees on as many frames or combs as one desires to place in the box. The box now used is an 8-frame brood-chamber. The hive can remain at the entrance of the colony that cast the swarm seven days, when it should be removed, as a second swarm may issue. Not only can the bees remain in my hiver permanently, but more room can be given the new swarm, without disturbing the bees or hiver. A second set of frames, or sections can be added to any extent. This cannot be done with the Pratt hiver. Another advantage with the Alley hiver is this: The bees in going in and out have but one piece of perforated metal to pass through, while in the Pratt hiver they must pass through two, and in order to get through one of the pieces every bee must stand on its head, or it cannot pass into the hive. Now if this is a good feature in any self-hiver, I will acknowledge that in this respect the Pratt hiver is superior to mine. Now, in order to place myself right, and do me justice only, and for correcting you Brother Root and my good friend Differn, kindly publish the above in the next issue of *Gleanings*, and I will find no fault if you continue to say the Pratt or any other self-hiver is superior to the Perfection.

GOLDEN-YELLOW OR GENTLE BEES.

Our golden-yellow bees are not proving to be as gentle as our leather-colored stock from imported mothers, says *Gleanings*. As there seemed to be a rage this season for yellow bees we began producing them. We are now getting complaints that the temper of the bees is not of the good quality of the queens we sent out a year or so ago; and yet if we send out those same queens again, we shall be, as we have been in the past, roundly abused because the *queens* themselves are not golden yellow. Which horn of the dilemma shall we take? If our advice is asked we recommend bees that are gentle and good workers, without reference to the golden yellow. We can produce one kind of bees just as

well as any other, and are willing to supply to the trade what it calls for; and that is just what every queen-breeder is willing and able to do.

Just our position exactly. Queen breeders are rearing queens for money. Although the five-banded bee dealers are lying awake nights to get square with me for the warning note, I soon expect to have them rearing a different class of queens. Sooner or later they will thank me instead of cursing me for what I have said.

Those fellows should understand that they can sell just as many or more leather colored queens as they can five-banded. 'Tis the quality of the queens and not the color that will sell them in the long run. The queen-breeder who can *rear* the best honey-producing strain will get orders for all the queens he can rear. To substantiate this statement I can mention the facts that my sales of queens reared from my famous hundred-dollar queen exceeded those of any dealer in the country. Why, one man paid me $1 for one of those queens and he says she was cheap at $100. See page 170 this issue. Blood tells every time.

A young man, a reader of the API, called here the other day and said among other things that he has quite a large drone-trap and when his bees swarmed he caught the queen and about a quart of bees in it.

The Perfection self-hiver is merely a large drone-and-queen trap; large enough to hold from six to ten Langstroth standard frames and the largest swarm of bees that issue. I guarantee to pay $5 in any case it fails to self hive the bees. The Perfection self-hiver is the first and last one that has ever hived a full swarm of bees.

If you do not like all there is in the API, just sit down and write an article that will please you, and it will please us to have you do so. See the point?

I saw a report in some of our bee-paper exchanges that *The White Mountain Apiarist* had sold out to some other bee publication. Brother Ellingwood says he has not sold out; and that the paper will soon reappear in a new form. E. F. Quigley says he had bought the list and the API got the facts from the *American Bee Journal.*

The *American Bee Journal* has come out in a new form. Brother York is bound to keep up with the march of improvements.

Reports of big crops of honey that all have been looking for and expecting to see have not come to hand. All bee-keepers appear to be in the "soup" this year as to honey. So far as the Bay State apiary is concerned, I can say that our bees never did better. The weather was fine all through September, and our hives were never so heavy in the fall as this year. The Punics and their crosses did much better than others in our apiary. The Punic colonies have combs solid with aster honey of a fine quality, and bees by the million. *The Punics are ahead.*

As I am a dealer in Punic bees of course the above report will not be credited by some parties. It is, nevertheless, a correct report all the same.

I have taken more than the usual pains this fall in preparing my bees for winter. A frame 2 inches wide and the same dimensions of the brood-chamber has been placed under each hive. Thus the bottom of the combs are not less than two inches above the bottom board. This gives plenty of room for the dead bees and a free circulation of air during the winter. Each brood-nest over the combs is covered by a wire screen. This keeps the bees in, so they do not get out in winter and die between the inner and outer hives. Over this screen is a mat and then a cushion of hay. From long experience with the

screen I know that it is a great advantage to the colony during the winter. By this entire arrangement there is a good circulation of air in the brood-chamber, yet no draft of air through the combs.

The hives in the Bay State apiary are nearly all of the thin double-wall style, and all the bees are wintered on the summer stands.

E. F. QUIGLEY says that the way to secure the mating of queens with choice drones, when the apiary is not isolated, is to place the choice drones around the apiary in all directions from one-fourth to one-half mile from the main apiary. He put some virgin Italian queens in a black apiary one-fourth mile away from his Italian apiary. Queens reared in the Italian apiary were all mismated while nine out of ten taken to the black apiary were purely mated. He says that the reason why there is so much complaint about the young queens from "five-banded" queens not producing five-banded bees is that these young queens seldom mate with the drones in the home apiary.

The above does not agree with my experience in rearing queens. Here is the result of one experiment tested in one of the Bay State queen-rearing yards. I did not have as many straight Italian drones early in the spring of 1891 as there should have been to fertilize my young queens promptly. I had at that time a fine Albino queen from the apiary of Dr. G. L. Tinker and thousands of her drones. I took a lot of the Albino drones and placed them in the yard with the Italian queens. The Italian drones were at the south end of the yard and the Albino drones at the north end, say, about 3000 feet apart. When the brood began to hatch from the young queens, I found that all the queens nearest the Albino drones, had mated to them, while those nearest the Italian hive had mated to the Italian drones. Now I have often stated in the API that neither queens nor drones go any farther from the hive when on the mating tour than is actually necessary in order to meet each other. The above experiment certainly verifies my opinion on this point.

The opinions of some beekeepers that queens fly from one to three or more miles to mate is all wrong. 'Tis contrary to nature for them to do so.

Brother Quigley is wrong in supposing that the reason why some of those young five-banded queens do not produce five-banded bees is because they go to some distant apiary and meet impure drones. The fact is, Bro. Q., there is not any fixed purity about the five-banded bees. I have found in breeding them that many of the young queens prove to be only "hybrids" when mated to five-banded drones. I have also found that there is no half way about the markings of five banded bees. They are either very beautiful or inferior hybrids.

I mean by the half way markings that no queen produces three-banded bees as straight Italians do. The five-banded bees are only a freak anyway.

Bro. Alley complains because I said that I saw no good accounts of the Tunisians (or Punics as they have been called) except those coming from interested parties. He calls my attention to a favorable report appearing in *Gleanings* of Aug. 1, from Mr. I. N. Moore, of California. I would say in explanation that when that issue of *Gleanings* came to hand the "Extracted" department of the last REVIEW was already in print. I have no pet race of bees to boom, and if the Tunisians have any desirable qualities no one is more willing than myself that the fact shall be known. —W. Z. HUTCHINSON in *Review*.

I did not know that I had ever complained that any one had been unfair, in speaking of "Tunisian" bees. I never saw a bee of the "Tunisian" race, and I do not believe Brother Hutchinson ever did. I do not believe any

such bees can be found in America; none to my knowledge have ever been sent here.

The explanation is all right, Bro. H., except the Tunisian part. That I cannot accept. No one but T. W. Cowan has ever mentioned Tunisian bees that I know of. There are no Tunisian bees in America and never has been.

A reader of the API writes thus:

"What is the use of a man posing as a bee expert in the leading bee papers who has no practical knowledge of apiculture save what he gets from a few colonies of bees kept in box-hives, and what ideas he picks up by reading the bee journals?

The person in mind seldom ever gets any honey from his bees, yet he sits in some office scribbling away for dear life and trying to pose as a great writer on bee matters. I know such a person, and every few weeks his articles appear in the bee papers. This week there is an article in a leading bee journal from this person on a subject he knows nothing about. Such men should be exposed."

J. R. C.

[I quite agree with J. R. C. in his opinion as expressed above. There are too many inexperienced beekeepers writing for the bee-papers. There are thousands of beekeepers in this country who can, if they would, write articles giving their experience in bee culture that would be of great value to beekeepers generally. Many of these beekeepers, like J. R. C., are thoroughly disgusted with the trashy articles found in some publications.]

Our old friend, Newman, writing under date Sept. 19, says: "I am again having a tussle with La Grippe, but in a milder form than previous attacks."

THE LARGEST HOUSE APIARY in the world is probably owned by H. P. Langdon, of East Constable, N. Y., who writes as follows: "Thanks to the REVIEW for helping me to build what is probably the largest house apiary in the world. It is 11 x 100 feet and capable of accommodating 200 colonies. I ran 100 in it this season and expect to move in the other 100 next spring. It is a perfect success."—*Review*

[Any beekeeper can take solid comfort in a convenient and well constructed beehouse. During my queen-rearing operations the past year, the weather has not interfered with my work in the least. In cool weather a fire is built in the stove, while in warm weather the windows and doors are opened.

This same house is used to operate the extractor in, to store combs, honey, etc.

Of course more or less bees fly to the windows when a hive is opened. All that is necessary to get rid of them is to open one of the windows: will say that mine are so arranged that the sash is quickly removed and the bees are out in a jiffy.

I advise all who have a fair amount of interest in bee culture to erect a beehouse, and thus increase the profits of your apiary and at the same time make beekeeping a more comfortable business.]

The *Progressive Bee-keeper* says that four horizontal wires on medium brood foundation for L. frames is a grand success in their apiary. Just our experience exactly, Bro. Quigley.—*Gleanings.*

I get good results and use no wires of any kind. Can get as good combs. without wires as it is possible to get with. To the dogs with wired foundation, that is if the wire must be put in the frames.

Subscribe for the API.

I think it is *Gleanings* that says the only good reports of the Punics come from those who have them for sale—Bro. Hutchinson remarked about the same. Of course these same remarks apply as well to dealers in all sorts of bee supplies. It strikes me that there must be a big set of liars in the bee business from Jake Timpe to A. I. Root. Do you wish to be so understood, Bro. Root?

I am inclined to think that there are a good many dealers in supplies who can and do tell the truth about their goods.

M. E. Hastings describes a patent feeder in a recent issue of the *Review*. Some ten years ago the API described a feeder which had all the advantages of the Hastings and there was no patent on it either. The feeder in question was made of tin and so arranged that the bees took the food from the under side and could do so even in the coldest weather.

HOW TO KEEP WAGON TIRES TIGHT.

Wagon tires get loose in very dry, hot weather from two causes, the chief of which is the shrinkage of the wood of felloes. It is a poor plan to wet the felloes and thus swell the wood, for it will very soon dry out and leave the tires as loose as ever. If, however, the wood be soaked in boiling linseed oil it will be swelled and the tires tightened as permanently as though cut or upset by a blacksmith. A writer in the Ohio *Farmer* gives the following instructions for doing this: "Make a trough a little wider and a little deeper than the felloes of the wheel. Heat linseed oil to the boiling point, and at this temperature pour in the trough. Have everything so arranged that you can immediately turn the wheel slowly through this boiling oil. Two or three revolutions are sufficient. Then take the next wheel. One heating is sufficient for four wheels, if the work is rapidly done. Better, however, add a little boiling oil after the second wheel is soaked. Have sufficient oil in the trough to cover the felloes. After the wheels are all attended to the oil may be poured into a vessel and kept till the next occasion. The skeptic of course says it will do no good. The oil cannot contract the tire. It is immaterial whether the oil contracts the tire or expands the wood. We do know that it makes a perfect job. On one occasion it so firmly tightened the tire that the spokes began to bend. This process of tightening the tires is far preferable to that of the blacksmith. The wheel retains its original shape better. If wagon wheels are so treated once a year they are able to endure the hot and dry season. The whole cost will be a few cents' worth of oil to the wheel and a few minutes' work."—*Exchange*.

"How to prevent covers from warping" is the subject of an article in *Review*. I can tell you in a few words just how it is done— keep them covered with good white lead and oil, give them a fresh coat each year, and my word for it, there will be no warping, cracking or leaking.

In the articles on the smoker question that have appeared of late in the *Bee-keeper's Review*, the Bingham seems to have carried off the palm, says *Gleanings*.

Of course the Bingham smoker carried off the palm. They are the smoker. Don't waste your money by sending to that man in Indiana for one of those cheap and worthless cold blast smokers. By the way, I wish I could get my cash for running that cold blast smoker and tin can feeder advertisment one whole year. Be careful to whom you send money. "A word to the wise," etc.

There is a feeder being sold under the name of "Hastings feeder." Don't touch it. It is not half as good as a tin pan or glass jar, described in September API, and the price you would have to pay for that patent feeder would purchase a dozen tin pan or glass jars. I would also like my pay for advertising that Hastings feeder.

HONEY AS MEDICINE.

Honey is one of the most valuable medicines in the world, and constitutes the principal ingredient of many medical preparations. It is used with the best results in many internal and external diseases; serves as a means for taking powders, for the preparation of salves and the sweetening of medicines generally. It is very beneficial in pectoral diseases, acts as an excellent detergent, and as a gentle laxative. In ancient times its free and regular use as an article of diet was regarded as a means of securing long life; and it thus came to be popularly considered as a specific against disease.

The following excellent receipts were taken from the *Honey Almanac* of Thomas G. Newman, 199 E. Randolph street, Chicago, Ill. Price by mail five cents. The almanac contains a large amount of useful information.

Sore Throat.—Honey can be used to advantage in constipation, and sore throat; it promotes perspiration, lessens phlegm, and is very healing to the chest, sore from coughing.

Hacking Cough.—A heaping teaspoonful of honey stirred into a raw egg is a very good corrective for a cough, which should be continued for several mornings.

A Burn or Scald should be covered instantly with honey, keeping it so until the pain ceases.

Croup.—For speedy relief, take a knife or grater, and shave or grate off in small particles about a teaspoonful of alum; mix it with about twice the quantity of honey, to make it palatable, and administer as quickly as possible.

Coughs and Colds.—Honey candy is an excellent remedy for Cough, Colds, Whooping Cough, etc. Fill a bell-metal kettle with hoarhound leaves and soft water, letting it boil until the liquor becomes strong—strain through a muslin cloth, adding as much honey as desired—then cook it in the same kettle until the water evaporates, when the candy may be poured into shallow vessels and remain until needed, or pulled like molasses candy until white.

Worms.—Before breakfast take a table-spoonful of honey, or a tea made of peppermint sweetened with ½ to ½ its bulk of honey.

A Severe Cough should never be allowed to run. A very good recipe is to put 10 cents' worth of balsam of fir gum into a pint of whisky; as the gum dissolves, pour off the liquid and add to ⅔ of honey ⅓ of the liquid. Take a tea-spoonful at a dose.

Honey Cough Medicine.—The following is a recipe of a valuable remedy for obstinate coughs. It is especially valuable for long-standing coughs in elderly people, and useful in all cases unattended with a hot skin and a very frequent pulse: Mix 1 pint each of extracted honey, linseed oil and whisky. Dose—one table-spoonful 3 or 4 times a day.

Children.—Honey is an admirable and very agreeable medicine for children. It is especially useful to those afflicted with **scrofula** or rickets. In difficult **teething,** rub the gums with a mixture of honey and an emulsion of quinces. For the removing of **worms**, honey is excellent, and it is beneficial in diseases of the mouth and throat.

Common Coughs.—This honey cough syrup is an excellent remedy for a common cough. One dose will often give relief. Stew half pint of sliced onions and 1 gill of sweet-oil in a covered dish. Then strain and also add 1 gill of honey; stir it well and cork it up in a bottle. Take a tea-spoonful at night before going to bed, or any time when the cough is troublesome.

1872 Keystone Apiary 1892

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Fertile, "	1.50,	"	"	1.00
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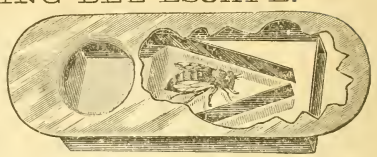

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THE AMERICAN APICULTURIST.

A Journal Devoted to Practical Beekeeping.

VOL. X. DECEMBER, 1892. No. 12.

FIVE-BANDED BEES.

A GOOD WORD IN THEIR FAVOR.

EDITOR OF THE AMERICAN APICULTURIST. Seeing your "notes of warning," in the Oct. No. of the Api, cautioning honey producers against cultivating, or having anything to do with the five-banded bees, is my excuse for writing this article for publication in your paper.

As you ask those that are interested to speak out, I will give you my experience, for the past season with six colonies of five-banded Italians, placed in a yard with a hundred colonies spring count. The yard of bees was made up of all the kinds of bees that are said to be the best, such as Italians, Blacks, Punics, Carniolans, Golden Carniolans, and hybrids of all the different species of bees that I had, and the five-banded bees showed so many excellent qualities, through the entire season, that I have no fault to find with them; but on the other side, will say, that for the one season that I have worked them, they have proved to be the best bees I have ever cultivated. I am only giving them credit for what they have done in one season, and how they will please me after a longer acquaintance, time will tell.

My experience up to the past season with the light Italians, the real beauties as they are called, agreed with yours, Mr. Editor; just as you say, good for nothing but to look at.

I have said as much against the beautiful light Italians, as any honey producer that I know of, for the reason that I never was fortunate enough to get any that could get a living, and something to spare, to pay me for caring for them.

The way I came to have the five-banded Italians was, I might say, by accident. The honey season for 1891 was the poorest in this locality that we ever had, and there were but a few colonies in my yard that got honey enough to live on, and nearly all those that did get more than a living were descendants from Bellinzona queens that I bought some six or seven years ago. Now at that time I had a few colonies that had lost their queens at swarming time, and I had got to have queens soon, or lose the colonies. In about a week I found some queens at the P. O. and also a letter, stating that the man I bought of had quit rearing Bellinzona queens, for the larger part of his customers were dissatisfied with them, on account of their being so dark colored, and that he was now sending out queens that pleased everybody. My first thought, on looking at the queens, was that I would re-

turn them to him, but his letter said that his queens pleased everyone, so I took them home, and gave them to six queenless colonies quite early in August. All were accepted, and had the same care as the rest of the yard, such as being fed for winter, and put into the cellar with the rest. All of the colonies that had these queens wintered and were carried out in the spring in rather poor condition, but better than I expected to find them, but they were in just the condition to be very liable to dwindle out before clover time, but there was no dwindling with any of them. Now, Mr. Editor, I will tell you what I like about the five-banded bees.

1st. They are a large, strong, healthy bee.

2nd. They are very industrious and can carry a good working gait, when the wind blows so hard all the other species of bees that I have cannot venture out.

3rd. They enter the sections just as soon as they are ready, and will climb right up and fill all that they can get the honey to do it with.

4th. They show but little disposition to swarm as only one out of the six that I had, offered to swarm the past season, and what they may do is to be learned later.

5th. They cap their honey the whitest of any bee that I own.

6th. They are as gentle as butterflies.

7th. They are perfect beauties. Now, Mr. Editor, I have no interest in any particular kind of bees. The bee that pays me best for my labor is the bee for me. My business is producing honey, and not in the sale of bees or queens.

I will tell you what the five-banded bees did for me the past wet season. The first gave me 132 lbs., the next best 99 lbs., the next 66 lbs., and the least gave me 50 lbs. and cast a swarm.

This was nearly all from clover, as basswood was a failure, and all was secured from June 20 to Aug. 1.

Now, Mr. Editor, I have been so well pleased with what those six colonies of bees have done for me the past season, that I have bought forty-two this fall and will report next fall to you, whether they are then in possession of the *red card*, that they so honestly earned, the past season in my yard.

IRA BARBER.

De Kalb Junction, N. Y.

[We have two queens in the Bay State Apiary from the same dealer from whom friend Barber obtained his. In everything but gathering honey they are fine queens, but not very gentle.

We reared several queens from those we bought which produce much handsomer bees, but find no fault with those sent us.

If you look over the back numbers of *Gleanings*, you will find that the product of one Punic queen is a good deal more than the combined returns from all the six colonies of five-banded bees mentioned above.]

FROM NEBRASKA.

'Tis not often one would expect to try a self-hiver the last week in September.

This is how it happened. Going out through the yard one afternoon, I found a fair sized swarm of bees clustered on the side of one of the hives.

Thinking perhaps they had swarmed out from some hive, I made a hurried search through the yard, but could not find where they came from. Not having an empty hive to put them in, I got

the self-hiver with its one frame of comb as I had it prepared in June and hived them in it. They settled down and built some comb during the night. The next forenoon, about ten o'clock, I found the swarm had come out again and were clustered as before, on the side of a hive. On examination found queen in trap. I removed the trap to get a better look at the queen, and while I had the trap in my hands, what should she do but come out through the zinc at the back of trap and fly away. Putting the trap back in place, I stepped back a little way and waited. Soon the cluster began to break up, bees coming back to self-hiver, and in a few minutes, queen and bees were clustered on its cover. I put them in again, this time giving them a little honey. Being away from home all the rest of the day, did not see them again till next morning when I found the place besieged by robbers.

A little cluster of bees were still with the queen, a good many killed in battle with the robbers, and some, I suppose, had returned to their old home. I had found on going through the hives more thoroughly, one colony with queen-cells, and suppose they came from that hive.

So few bees were left, and the robbers were so bad, I did'nt care to bother with them any more, so took off the cover to self-hiver and let them go.

These are the facts in the case, and while they may not seem of much importance there is one thing certain. The queen and some bees stayed in the self-hiver for three days when there was no honey they could gather, and the robbers carried away what I gave them.

And while the queen *did* go through the zinc at the back of the trap while I held the trap, she could *not* get through the zinc in front. I believe the self-hiver is a *success*.

We have had a good flow of honey this fall; bees are in good shape for winter.

Weather, so far, has been warm and pleasant; bees are carrying pollen almost every day, but there has been no honey since about Sept. 25.

MRS. A. L. HALLENBECK.

Millard, Neb.

SWARMERS, PUNIC BEES, ETC.

One of the brightest writers on apiculture remarks about several things as follows:

"At the commencement I was a little down on you. The polished way *Gleanings* has had in criticising men and things affected my judgment. The fraternity should be thankful that you just pitch in and plainly tell people what you think of them. We need something straight, plain and open to counterbalance the ——— and you just give it to us. I understand how it makes a man mad to see how his ideas and inventions are worked upon by others and given to us as theirs. See that whole self-hiver affair for instance. Without your inventive genius all of them would be pushed aside. Look at the way some people have treated the Punic-bee question!

The idea that an interested person cannot tell the truth about his wares!"

The writer of the above voices the sentiments of thousands of fair-minded beekeepers. It is a notorious fact that every person who claims to have invented a self-hiver, borrowed every important feature from my invention. One thing is sure, and that is, all who use self hivers infringe my patent. I have patented a certain principle, and that principle must be applied to all self-hivers in order to catch the queen. Without the queen

no hiver can be a success. Some people think by applying the above principle in a different way from mine they do not infringe my rights: they do not seem to understand that a patented principle can be applied in a good many ways and still comply with the terms of the law.

Yes, Bro. Root spoke rather harshly of the Punic bees. Just before he did so, he ordered another Punic queen of E. L. Pratt and used words very much like these: "Please ship us one select tested Punic queen. The one you sent us last fall gives good satisfaction. We shall say some very complimentary things of them in next issue of *Gleanings*."

Well, when that next copy of *Gleanings* came out, you can imagine about how much Mr. Pratt and myself were surprised.

Root's remarks "that only those who had Punic bees for sale were the only ones who spoke well of them," were very unkind and pretty rough to say the least.

Mark this: Punic bees and their crosses are going to be the strain of honey bees that will take the lead in this and all other countries where an intelligent beekeeping community has a foothold.

It will not matter how much certain inexperienced beekeepers call them common black bees, or how often some others call them Tunisian bees or what not. Punic bees have come here to stay, and the prejudice, now existing against them in some quarters, will soon be overcome by the good work the Punics will do for those who are so fortunate as to introduce them.

It strikes me that a blind person might see why all this prejudice exists against the Punics. It is more against Mr. Hewett, the man who first sent these bees to this country, than anything against the bees. Mr. Hewett did something that incurred the displeasure of the editor of the *British Bee Journal*, and editor Cowan has undertaken the job of killing out this man Hewett. The Api stood up for Hewett and that was a good deal like shaking a red garment before the face of a bull. From that moment to the present time, Cowan, the said editor, and all his friends on this side of the ocean have made war upon the Punics and those who deal in them, and especially against ourselves.

Now this is the inside history of all the screeching about Punic bees: let them howl: as soon as beekeepers find it is to their advantage to introduce this race they will do so, and all the noise their opponents can make will avail nothing.

Several of the parties, who are now trying to destroy the reputation of the Punics, tried the same thing on the golden Carniolans. All readers of the Api know how well they made out with the latter.

MY OUTING.

(*Continued.*)

In my last notes I hurriedly passed from the landing at Cottage City, Martha's Vineyard, to my arrival at Portland City. This day's sail lingers in my memory, and I cannot help but refer to it again. I remember the passing of Nantucket in the distance, "The bare and bended arm of Massachusetts" and the entrance to Portland harbor. Beautiful views are afforded of Peak's and Cushing's island, Fort Preble and the city of Portland rising in terraced lines along the hill. I quote the following from his-

tory which occurred in my own day and recollection.

"This busy harbor formed the theatre of action for the only invasion of a northern port by the enemy, during the war of the Rebellion, when the revenue cutter Caleb Cushing was 'cut out' from under the guns of the now obsolete fort on the right, by an armed force, who, at midnight, 1863, overpowered her crew and succeeded in getting away with the craft, an armed "sailing schooner of modest size."

No doubt the Cushing would have been turned into a privateer by her captors, had not her absence been discovered at daybreak from the observatory. Pursuit was made in two steamers, the *Forest City* and the *Chesapeake*, the latter of the Portland, New York line was herself afterward captured on the high seas, by a band of confederates, who joined the ship as passengers, took possession, and sailed to an English port.

These two steamers pursued the cutter, overtook her becalmed about twenty miles from shore, where the cutting out party, with the crew as prisoners, abandoned the ship after firing her magazine, blowing the trim little schooner into fragments."

Our good ship has now reached the wharf and made fast. It is the privilege of passengers to remain all night aboard if they desire, and many take advantage of this privilege, as it saves the expense of one night at the hotel. I went ashore for a walk. I naturally turned into State street, and presently found myself in State St. square which contains a fine bronze statue of the poet Longfellow, the first erected in his honor save the bust at Westminster Abbey. This is his birthplace and early home; just under the shadow of this statue, a band of salvationists were preaching to a motley crowd and telling in their way "The old, old story of Jesus and His love.

I passed on to the hotel "The Preble House," and there supplied the innerman with such things as were necessary for his enjoyment of life in Portland.

A little more history here will describe Portland better than I can.

"Founded in 1632 under the Indian title Machigonne, the now city of Portland, during the earlier days of settlement, was the scene of many a fierce encounter between its hardy pioneers and the redmen. After three bloody assaults, the settlement finally in the year 1689, succumbed to these Indian attacks and those who escaped death by the tomahawk and arrow, fled, leaving the deserted ruin of fort and home to bird and wild beast for a period of twenty-five years, when a number of sturdy veterans, from the disbanded garrison along the coast, made their homes here, and when the Indians once more came down to pay their compliments, they found a line of fortified streets and strong guards at every point.

The town now bore the name of Falmouth, and enjoyed a flourishing commerce with the West Indies, when disaster again visited it in the form of Captain Mowatt's British fleet which sailed up its harbor one bright morning during the Revolutionary period 1775, and after a destructive bombardment of eight hours, landed a party of red coats who fired all the buildings spared by the red hot shots of the ships.

Falmouth again sank in ruins, yet to appear again, and like the reconstructed city of Portland to go through a third fiery ordeal upon the glorious 4th, 1866, when a carelessly thrown fire cracker started a conflagration, which, burning with fatal steadiness for sixteen hours, destroyed ten millions of property. Today it has a population approaching forty thousand, and a valuation of as many million of dollars, four daily newspapers, half a dozen National banks and thirty odd churches."

With a fragrant Havana for a companion, I now wended my way back to the steamer for a night's lodging.

My time being limited, I was obliged to be up betimes in the morning for an early start on my journey West. The morning proved fine, and I enjoyed a walk across the city to the Union depot,

where I took the train for *Salem, Mass.*; my next stopping place. I arrived in Salem in time for dinner, after which I looked up my old friend, Mr. Silas M. Locke, ex-editor and proprietor of the AMERICAN APICULTURIST and we together visited another old friend at *Wenham*, Mr. Henry Alley, a world-wide noted rearer of queen bees and the present editor and proprietor of THE APICULTURIST.

Mr. Alley seemed only too glad to see us, and showed us his pets which are thoroughbred bees. Here we saw side by side, and yet as distinct as though they were different breeds of chickens, three distinct races of bees, viz., Italians, Carniolans and Punics. Mr. A. has mastered the science of apiculture so thoroughly that he is able to control the mating and keep each strain separate.

He has also invented a swarm hiver or self-hiver which is another stride in bee-culture. This is managed in conjunction with his famous drone trap. Mr. A. has given this self-hiver much thought and seems to have reached the acme of success. He took great pains to explain the theory to us, and especially pointed out to us a new feature of perforated zinc which is placed at the back of the drone trap: this allows the queen to pass through and crawl back toward the entrance of the hive, but will not pass a drone. Just here Mr. A. claims a feature which is original with him and which seems to be the one thing that completes his hiver and insures its success every time. This feature is the placing of a frame of dry comb in the hiver just behind the drone-trap, so that, as the queen crawls back, she finds this comb and remains on it; of course the returning bees find their queen on this comb and remain with her.

We say *Eureka!* and tear ourselves away from a visit which was enjoyed hugely, as it brought back to our remembrance times past when we were head over heels into the bee business, and in touch with the fraternity from Maine to California and we wished we were again; but, at present, to use a slang phrase, "we are not in it".

Returning to Salem, we found the time had passed so rapidly that we must of necessity remain over night, but I was not sorry as it gave me the opportunity of enjoying a visit with the family of my friend Mr. L. I found I could not do Salem in the time I had scheduled for it. What I saw and learned is briefly as follows:—Salem is the oldest town in Mass., except Plymouth, having been settled in 1628. The meeting house of the first Presbyterian church built in 1634, is still standing and is one of the curiosities I saw. It is about 15 ft. square and contains a gallery. The lock and key on the entrance door are massive; I would not like to fall overboard with the key in my pocket. Roger Williams was settled over this church from 1631 to 1635, so that it must have been built during his ministry. I looked through the Essex Institute which contains many historical relics which are curiosities to this generation. There are so many that I might spend several days to rightly see them and enjoy their antiquity. I took in the witch house (all readers have read of "Salem Witchcraft"). It is occupied now by a photographer. From here I board an electric car and ride to Marblehead. If readers of API would like to know further of my outing, I will give it to them later.

T. O. PEET.

MILK-PAN BEE FEEDERS.

For winter stores, when fed in the fall, I would as soon have a common milk-pan to do the feeding with, as anything, says Mr. Doolittle in *Am. Bee Journal*. Set this on the top of the hive, and fill it with syrup, after which pull up two of three handfuls of grass and scatter over the syrup for a float, or use shavings or corn cobs, as is preferred. The trouble with the latter is, that they soak up much of the syrup, while the former, do not.

Set up a small piece of board, a chip, or a piece of honey section against the side of the pan, so the bees can easily climb over to the food, when a hole is to be opened to the hive below, by turning up one corner of the quilt, or removing a slat in the honey board for the bees to come up through. Now scatter a few drops of the food down through the hole, and over the chip, and put on the cover, seeing that the joints are all tight so that no robber bees can get in.

Just what the Api has been recommending for years. Yes, I have done so within two months. Let those beekeepers who have money to waste purchase the patent feeders, the common beekeeper cannot afford to use them, especially as they are not as good in anyway as the milk-pan feeder. I tell you friends, that the feeders and smokers so extensively advertised in nearly all the bee-papers, do not compare in utility and practicability with the fruit-jar feeder, nor with the substantial cold-blast smoker of Bingham and Hetheringtons. The Hill feeder is a perfect nuisance in the apiary. When the food is about half taken up by the bees, the atmospheric pressure is released and the syrup runs out, thus setting the bees to robbing. Don't be deceived by the flashy advertisements of feeders and smokers found in some of the papers.

I recently saw in one of the Api exchanges that sugar-honey, so far as the flavor was concerned, is far better and pleasanter to the taste than pure honey. I took a notion one day to test the matter for myself. I can say that honey and sugar mixed, say two pounds of sugar to one of honey, is superior in flavor and quality to clear, pure honey.

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SPECIAL NOTICE.

THE AMERICAN APICULTURIST circulates in every county in the United States, and is read by more than 10,000 beekeepers. Edited by a beekeeper of thirty years practical experience.

Subscription can commence at any time as each number is complete.

Remittances.—Make money orders payable at the Wenham, Mass., P. O. Cashier's checks and American Express Money orders are safe ways to remit Currency may be sent in Registered Letters. Odd change in small amounts may be sent in one and two cent stamps.

A pencil mark across this indicates that your subscription has expired. Unless you notify us at once that you desire the paper continued, no more copies will be sent to your address. We are ready and willing to continue and wait a reasonable time for pay if the money is not at hand to remit with subscription. Now please attend to this matter at once, or you may forget all about it.

Please find some friend who will send in his subscription with yours.

The American people are a wonderful nation. This country has just passed through an exciting election. The politicians, on both sides, did their best to make the voters believe the c untry was going to the———no matter which side won the victory. Well, one side has carried the day, and we still live. In two days after the people had decided by their votes who should control the government for the coming four years, they had settled down to business, and little more will be heard from the politicians for nearly a year. It remains to be seen whether a high or a low tariff is the better policy for the people of this country. Let us have the best one at all events.

Beekeepers are getting sleepy. Can't some one of the readers of the API write an article that will awake them? Who will try it? What is wanted is a big bomb dropped right down among the beekeepers; so charged that when it explodes, the noise will be heard as far west as California, and with force enough in the east, to break window glass in Nova Scotia.

If something isn't done pretty soon, the beekeeping community will not arouse in season to reap the honey harvest of 1893.

We have had the Punic bee question; the API has sent out a warning note; yet beekeepers sleep right along as though nothing has happened. Who will fire the first gun?

Nearly all who write to the API want to know when we shall make public our new way of rearing queens. It will be given by and by. We want to illustrate and so describe the system that all will understand it. We are waiting to see if some others won't claim it before it is published. Mr. E. L. Pratt is the only person to whom the secret of this new method of rearing queens has been confided.

Those beekeepers living within easy reach of Chicago must be contemplating a good time in 1893. If they do not make a good showing of honey and apiarian implements at the Fair, visiting beekeepers will be disappointed. Of course the Fair is too far away from Massachusetts for beekeepers here to think of making any display at all.

The American Beekeeper says there are not more than half as many colonies of bees in the country as there were one year ago. We found that out as early as July last. All who deal in supplies were made aware of the fact by the light business they had.

Now that bees are in winter quarters, let them remain so until they commence to carry pollen freely in the spring. It will make little difference what the trouble is with bees in winter, nothing will be gained by overhauling the combs before the colony is fairly wintered through.

The bees should have several cleansing flights before they are meddled with for any purpose in the spring.

Don't undertake to feed a hive of bees in the winter. It is sometimes done successfully, but it proves a failure in 90 per cent. of all cases so treated. There is no practical method, and no feeders by which winter feeding can be made a success or practical.

In some parts of the country it is absolutely necessary to put bees in a cellar, or some such place in order to carry them safely through the winter. In localities where they will winter on the summer stand, it is much better to leave them out.

It is well enough to advise beekeepers to order supplies early, but many who suffered the experience such as a good many did last spring in the loss of bees, will not repeat the operation of ordering supplies in winter. When spring opened, many beekeepers had a lot of old supplies, as well as new ones on hand.

Now that we have finished the business of politics, let us settle down to other occupations at once. Commence by subscribing for the API for 1893. No politics in the API, and no one will care to read such stuff till next fall. We are ready to put your name on the list at any time you say so.

If you desire to improve the API, just sit down and tell our readers what you know about bees, and some others will tell you what they know about them.

A new treatise on apiculture "Practical and Profitable Bee Culture" will be begun in the Jan., 1893, issue of the API. This work will take more or less space in the journal for some time. Every point connected with practical beekeeping will be touched upon. The younger beginners in bee culture will be pleased with the first few chapters, while the older readers will find much all through that will interest and instruct them.

Our new way of rearing queens, mention of which has been made in this paper, will appear in some number of the API before it is time to commence queen rearing another year.

All queen dealers will be interested to learn how queens can be reared in full colonies without disturbing the bees, queen, or in any way interfering with the working of the colony. The method will be fully illustrated so that it will be easily understood.

Renew your subscription to the API, and get some one you know is interested in bees to send 75 cents with yours. Each issue of this journal will be worth $5 to any live beekeeper in the year 1893.

The API will begin on its eleventh year next month. Now, friends, crown the event with a big number of subscriptions. I tell you we will make it the banner year so far as interesting and practical matter goes, if you will just help swell the list of subscribers. Read the inducements to renew and to new subscribers found on another page of this issue.

To-day (Nov. 8), several colonies in the Bay State Apiary are carrying in pollen. At the same time the weather reports say there is snow, blizzards and whatnot for weather at the west. On Nov. 17, they also carried pollen.

Castles in the air, so far as the profits in beekeeping are concerned, is pretty well ventilated in *Gleanings* of Nov. 1. Brother Root cites an instance where a man with little or no experience in beekeeping purchased 100 colonies of bees and in order to secure 15,000 pounds of honey, removed hybrid queens and introduced Italians. What folly! This same man advertised the hybrid queens to such an extent that the sale of the queens did not pay the advertising bills.

Some queen dealer, most likely one of those five-banded fellows, reaped a rich harvest in the above deal. The old story, a fool and his money, etc.

Dr. Miller says the Automatic hiver I sent him was a success. It hived the bees, but somehow the swarm deserted the hive, and all returned to the colony they issued from. Excuse us Dr., we read it the other way.

If I remember correctly, Dr. Miller said the weather was cloudy and stormy for several days after the bees swarmed. No wonder they returned to the parent hive. I think I would go home and stop with the old folks a while if I could'nt get "corn and bacon" away from home. Wouldn't you, Dr.?

Some time ago I saw in one of the bee-papers a statement by a beekeeper that he had attended several bee conventions and did not hear anything said in favor of Punic bees. Had that same man attended the conventions held by the Republican party within a few months, he would not have heard much said in favor of Grover Cleveland. Grover got there just the same, and so will the Punics. You can bet your money on the Punics with as much assurance of winning, as you did on Cleveland's election.

Mr. Geo. Sprague describes an automatic hiver in *Gleanings* for November 1. I hold a patent on that same device granted me two years ago. Of course there are a few slight alterations from the swarmer I devised; but the only principal feature that makes it in any way practical or valuable, was patented by me. Brother Root did not even hint that several others had described almost the same thing. 'Tis a wonder that Brother R. did not say the Sprague hiver is not as good and as practical as the Pratt hiver. It must be that the foot-note was crowded out.

Ground corncobs are recommended by a writer in *Gleanings* as a good absorbent to use as a winter packing for bee-hives. It strikes us as being a good thing. More than twenty-five years ago, corncobs were used in the Bay State apiary as a winter packing. Many beekeepers use them now, and I know of several who have the same corncobs now, and use them too, that they did some thirty years ago.

I have used the new Hoffman frames this season, by way of trial, in 15 hives, all transferred colonies. I am afraid they will not do for this latitude. Dr. Miller's prophecy is fulfilled very exactly. That sliding of frames, and handling them in groups, of which I had pleasant visions, has gone where other dreams go.—*From Gleanings.*

That's it! I well knew a howl would come up against the Hoffman frame as soon as beekeepers had a chance to test them. Some dozen years ago I pronounced them a nuisance and never have seen any reasons to change my opinion. In fact, I am more strongly convinced than ever that they are the worst possible frame that anyone can adopt. They are removed from the hive at any time in the year with the greatest difficulty, and there is not a redeeming feature about them. The plain Langstroth brood frame is the frame for the beekeeper who expects success in keeping bees.

NOTES AND COMMENTS.

BY HENRY ALLEY.

MATING CHOICE QUEENS TO CHOICE DRONES ON HANLON'S ISLAND.

A short time ago, says *Gleanings* for Nov. 1, 1892, a firm in Canada advertised that their queens were mated to hand-picked drones on Hanlon's Island. A resident of Toronto (he has moved away now) wrote us shortly after, that there were no bees on Hanlon's Island, and that the mating of queens there was all a myth. We promptly wrote to the parties in question, for an explanation. They assured us that it was a fact, and referred us to the names of several parties as proof—among them Mr. John McArthur, 881 Yonge St., Toronto, who bred the queens for them.

It seems that Mr. M. has had in mind the mating of choice queens to choice drones on this island for ten years or so back; but until 1889 it was so barren that bees could not be supported there except at an expense. At that time the city of Toronto spent over a hundred thousand dollars in beautifying and improving the island; and it is now stated that it blossoms like the rose, and will support a large apiary. Mr. McArthur took advantage of the situation and put upon the island some choice stocks, and has been experimenting for three years back with the matter of mating queens to drones of his own choosing.

The island itself is two miles from the city, by a bee-line, while the bees that have been used for experimental purposes were a mile and a half farther, on the other side of the island — quite a safe distance for mating. Mr. M. proposes to raise queens there the coming season: and as it is a great pleasure resort, ferry-boats go back and forth every thirty minutes, and hence orders for queens can receive prompt attention. This may seem like a little free advertising; but when a beekeeper has enterprise enough to take advantage of a good thing we feel like encouraging

him; for it would indeed be very desirable, and a great boon to beekeepers at large, if we could take drones and choice queens and have them crossed. In speaking of this we do not forget D. A. Jones' experiments in the same direction, on some islands in Georgian Bay. The islands being barren of nectar bearing blossoms, the enterprise was abandoned on account of the expense.

The great trouble all along in queen-rearing has been the inability on the part of beekeepers to perfectly isolate and so perpetuate certain desirable characteristics in certain bees; and it is only those who have easy access to an island, who can do so with reasonable certainty or success.

[In my opinion there is not an experienced queen breeder in the world who will express such views as Mr. Ernest Root has in the above. I have clearly shown in the last thirty years, that bees need not be kept more than one mile apart to secure absolutely pure mating. There are fifty queen breeders in this country who can, and do ship far better queens reared in the usual way (as they have always reared them, I mean) than any breeder can rear or have fertilized on any isolated island. Any queen breeder who understands his business always selects choice queens to rear his young queens from, as well as to select the drones to be used to mate the queens. Now can E. R. Root, or any other beekeeper show wherein that queens mated the same distance on land from other bees as they would be on some island, are not just as good?

Well, Brother Root, have you forgotten your reply given in *Gleanings* to the person who asked you a question touching this same point? Just look over the back numbers of *Gleanings* and read what you said. "Never mind the color, etc., of the drones."

The proper way to select drones is by the full colony of bees, and not by hand picking. 'Tis the fellow who wants to experiment in rearing queens and make people believe he is producing a better class of bees, that is hand-picking drones; in fact, it is an advertising dodge anyway, and it seems to me it will be so understood by all who purchase queens. I do not see how anyone can select any quality but color in hand picking drones. If the selection is made for other qualities, it would no doubt be interesting to a majority of beekeepers to know by what one judges the good points of drones when the hand-picking process is resorted to.

The desirable drones and the way to select them is to take the colony that has produced the largest amount of honey during the season, and use such drones only. It need not be done by hand picking, and the queens need not be carted off to some isolated island upon which some one has expended $100,000 in beautifying.

Just keep the bees in their own apiary and place drone-traps on all hives from which the drones are not desired. By using drone excluding metal in the traps, all the queens in the apiaries nearest the selected drones can be mated to those particular drones.

Some years ago D. A. Jones tested the experiment of having queens fertilized on an island some five miles from the main land. It was not a success. The queens, so fertilized, were no better in any respect than those produced in the apiaries on the main land and in the yards of any careful queen breeder.

If any one desires to experiment with bees and queens on an isolated island, there can be no objection thereto; but if these same parties desire people to believe that such a method is the only one by which pure queens of any race, or queens of the best quality can be produced, the API will be found opposed to the scheme.]

Where are those promised new bee-papers? I do not believe we shall have a new crop of them for a long time to come.

Don't fail to see January API.

"Qualifications of an Apiarist," is the subject of a good article in a late issue of *Gleanings* by Mr. Doolittle. Give the beekeepers weather of a good quality, and the apiarist will manage to take care of the rest. The following are some of the good points in Mr. Doolittle's paper:

"How often have I tried to get certain persons to take a bee-paper or to send for a good book on bees, only to be met with certain excuses which went to show that the persons addressed would not make a success in bees. A man who is not willing to put a few dollars into the bee-reading of to-day shows by that very thing that he will not make a success of it; for if he has the right kind of love for the little busy bee, he will devour all the reading on the subject which comes in his way, as eagerly as a hungry man eats his dinner."

This is the experience of all when soliciting subscribers to any bee journal. The trouble is these facts cannot be placed before the people that should see them.

"Besides *Gleanings*, take all the other bee-papers which you possibly can; and, before any of these, be sure to get at least one good book on bees. Why I say procure the book or books first, is, that no man is ready to understand the bee-papers till they are acquainted with the elementary principles of our pursuit. There is scarcely a week passes but that I get a list of questions which I know wouldn't have been asked had the writer a good book on bees, and had they read that book understandingly. From these papers and books the mind is to be stored with useful knowledge which can be put into practical use as soon as the season of 1893 opens."

The non-reading, beekeeping class depend on those who do read the bee-papers for all the points they get. Read the bee-publications for the same points you do the newspapers.

I cannot say there is not such a thing as knowing too much about bees; the only people who seem to be troubled in that way are those who do not read bee-papers or bee-books.

Some of our contemporaries claim very large circulation, but whose claims are unfounded. One of them, who some time ago claimed 4,000 subscribers, offered his entire list to us recently for a few dollars, but we declined it. There are only 500 names on the list.—*Exchange.*

So far as our experience goes, we have found that the number of subscribers any paper has makes very little difference to the advertiser. Most of the answers to advertisements come from those who read the sample copies sent them. We have inserted advertisements in some of the new bee-papers, and after the first few months no one would make reply to them, and of course we were obliged to withdraw our patronage from such papers. Therefore we claim it is the number of sample copies sent out and not the regular list that pays the advertiser. It is not worth while for this or that paper to brag of what a wonderful advertising medium they have. The best proof that a paper is a good one in which to offer goods for sale is the one that has the largest number of genuine advertisements in each issue. We had rather have an advertisement in 1,000 copies of a paper sent out as samples, than one in 10,000 on the regular list.

Have you renewed your subscription to the API?

Dr. Miller says that freezing hurts honey. Well. it does. Freezing contracts the honey and comb, and causes it to crack, then leak, etc. As proof that cold causes honey to contract, will say that I filled about fifty half-pound bottles with cold extracted honey and drove the corks in with a hammer. The bottles were then placed in a warm room to prevent the honey from granulating. As soon as the honey got warm, all the corks were forced out by expansion of the honey.

Bingham & Hetherington advertise that there are more than 100,000 of their smokers and honey knives in use. No one will doubt that statement No one should doubt their statement that there are more than 100,000 of our drone-traps in use. I tell you that intel igent bee keepers appreciate a good thing and they use them, too. Now we expect to say, and in less than five years at the farthest. that our improved Self-hiver trap is in the hands of 50,000 beekeepers. The improvements in the trap were made to meet the points that a few beekeepers suggested, who have the old style trap in use. The entire front of the new trap is covered by perforated metal, and a part of the back also. Now the bees can pass directly through the trap when they are once in it.

No doubt many of our subscribers are much interested in "My Outing" by T. O. Peet. A good many readers of the Api, now located in the far west, went from Massachusetts, and those, as well as other of our readers, will find much in friend Peet's articles that will please them.

We certainly did enjoy the visit friend P. made us. The last time we met him was at the apiary of J. H. Nellis, of Canajoharie, N. Y. Mr. Nellis was at that time doing a thriving supply business. But how things have changed within a few years! A. I. Root and ourselves are the only ones now in the bee business that were in it at the time Mr. Nellis was.

I don't know how it is with A. I. R., but so far as I know I am all right for a long time to come. My health is good, has always been good, and I shall try to keep it so.

Bros. Root and Dibbern get things mixed when they write about the Perfection hiver. Both the above gentlemen have an idea that our Self-hiver is nothing but a box that catches the bees when a swarm issues. Please read the *new* descriptions of the Perfection in Jan. '93 Api. I rather guess I can change the construction of my hiver to suit the times as often as Bro. Pratt and Dibbern, though I must confess it is a hard chase to keep up with the rapid changes that Dibbern makes. Dibbern has had several Self-hivers that hived all but nine-tenths of the swarm, and he considered it a success, yet he comes down on the Perfection hiver when he knows it hives all the bees.

They worked to suit him, yet as soon as I described an improvement in self-hivers, he at once made a change in his.

If Dibbern continues to adopt our ideas and changes, he is likely to devise a swarmer that will hive more than a few bees and the queen. But, my dear man, can't you credit the person you get your ideas from, with knowing something about how an automatic hiver should be constructed? I have given indisputable evidence that my hiver has worked successfully in every case but one. Mr. Dibbern never hints to the readers of the *Western Plowman* that the Perfection Hiver ever hived a swarm of bees. He never forgets to show up the "imaginary" weak points in it, however.

1872 Keystone Apiary 1892

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Fertile, "	1.50,	" "	1.00
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WILL FURNISH YOU the coming season, No. 1 White Basswood, 4 1-4x4 1-4, one-piece V-Groove Sections, at $2.50 per 1,000; second quality, $1.50 per 1,000. White Basswood, 16-lb. Shipping Cases, in flat, $7 per 100. All our goods warranted. Special prices to dealers. Our Sections are in use in nearly every State in the Union. WAUZEKA MFG CO, Wauzeka, Wis.

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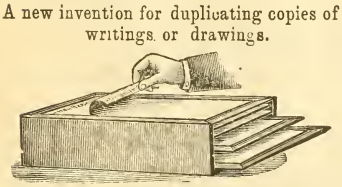

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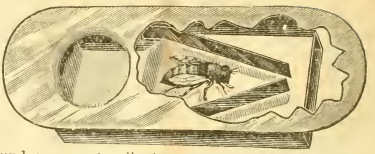

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